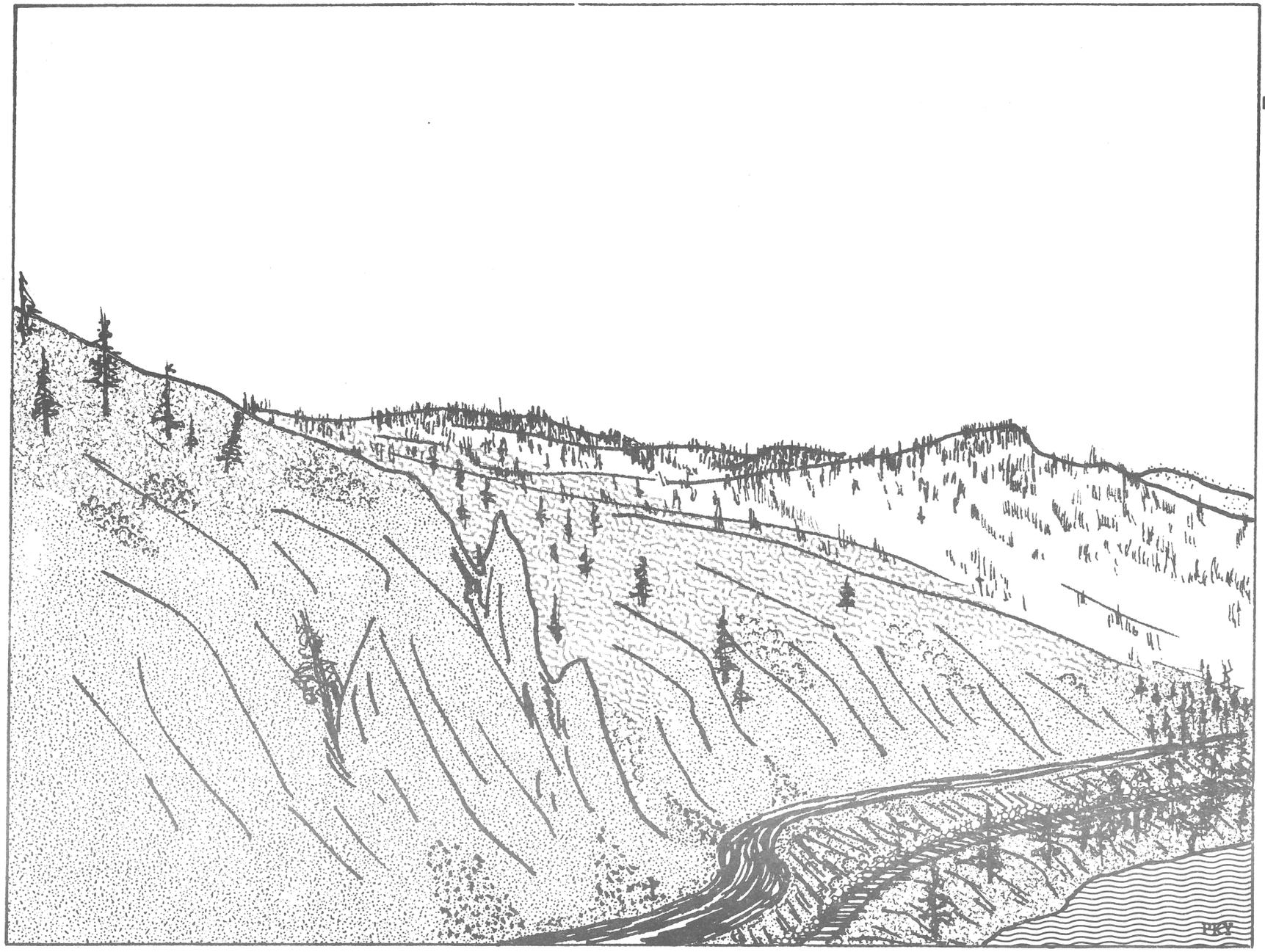

SOUTH THOMPSON PLANNING REPORT

THOMPSON-NICOLA REGIONAL DISTRICT

PLANNING DEPARTMENT

1975

INTERIM REPORT

TNRD

THOMPSON-NICOLA REGIONAL DISTRICT

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1975

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THOMPSON-NICOLA REGIONAL DISTRICT

KAMLOOPS, B. C.

JANUARY, 1975

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PART I

The South Thompson River Basin is a major sub-regional area of the Thompson-Nicola Regional District. The South Thompson serves as a pathway for major salmon runs, a corridor for rail and highway transportation, a recreational resource for the Kamloops/Shuswap population, a scenic treasure, an agricultural base, a reservoir of flat land, and a clean water supply. It contains a priceless record of our archaeological and historical past. At the same time, it is obvious that this area is a delicate and vulnerable ecological and aesthetic system. Haphazard or random residential sprawl, ill considered industrial development, or inappropriate land use of any type could endanger and destroy this resource permanently. A policy statement indicating the desired directions in which the Regional District should permit development to proceed is imperative. This document, then, is a statement of policy.

SOUTH THOMPSON RIVER - CORRIDOR AND WATERSHED

The South Thompson Planning Area is difficult to define. First, it is clear that no planning boundary can be viewed as a discrete, impermeable boundary. For political or legal reasons such lines become necessary, however, it must be seen that planning for water quality in the South Thompson Basin has direct effects on Salmon in the North Pacific Ocean - thousands of miles away. On the other hand, in terms of land use control, we may effectively direct our interests to those lands over which we have legal responsibility and to those lands where human activity is likely to have the most direct impact on the hydrologic and environmental unit known as the South Thompson Basin.

In keeping with these criteria, three planning areas present themselves:

Shuswap Watershed

The area within the South Thompson Basin but outside the political and legal jurisdiction of the Thompson-Nicola Regional District. Over this area we have no authority to plan. This area lies entirely within the Regional District of Columbia-Shuswap.

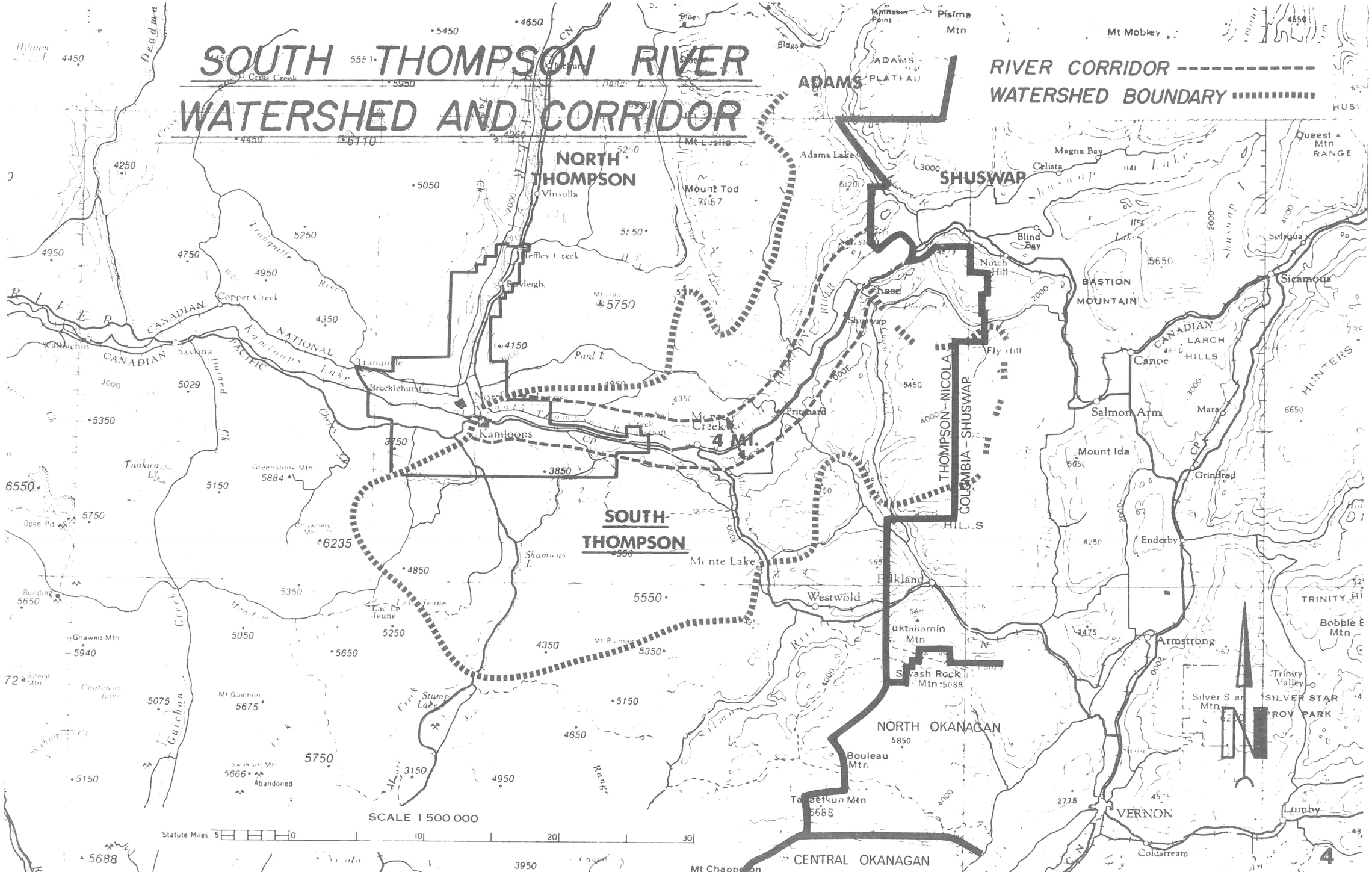
South Thompson Watershed

The area of the basin (watershed) inside the Thompson-Nicola Regional District. This area would include all parts of the watershed within the Thompson-Nicola Regional District.

South Thompson Corridor

An area (corridor) arbitrarily defined as an area within 2 miles of the South Thompson River itself. Obviously, the corridor is completely within the South Thompson watershed. This distinction allows us to focus more particular attention to the immediate environs of the river itself.

These area definitions will be useful in interpreting this report.


SOUTH THOMPSON RIVER
WATERSHED AND CORRIDOR
RIVER CORRIDOR
WATERSHED BOUNDARY
NORTH THOMPSON
SOUTH THOMPSON
ADAMS
ADAMS PLATEAU
SHUSWAP
BASTION MOUNTAIN
CANADIAN LARCH HILLS
HUNTERS
THOMPSON–NICOLA
COLUMBIA–SHUSWAP
NORTH OKANAGAN
CENTRAL OKANAGAN
4 Mi.
Kamloops
Monte Lake
Westwold
Falkland
Salmon Arm
Sicamous
Armstrong
VERNON
Enderby
Chase
Shuswap
Pritchard
Mount Tod
Mt Leslie
Pisma Mtn
Mt Mobley
Queest Mtn RANGE
Magna Bay
Celista
Blind Bay
Notch Hill
Fly Hill
Canoe
Mara
Mount Ida
Grindrod
Tranquille
Brocklehurst
Copper Creek
Jeffley Creek
Bayleigh
Paul L
Tunkwa L
Greenstone Mtn
Open Pit
Gnaweo Mtn
Spaist Mtn
Mt Guichon
Abandoned
Shumway L
Lac La Jeune
Mt Bulman
Stump Lake
Tuktakamin Mtn
Splash Rock Mtn
Bouleau Mtn
Tapaetkun Mtn
Mt Chapperon
Silver Star Mtn
Trinity Valley
SILVER STAR PROV PARK
TRINITY
Bobbie Burns Mtn
Lumby
Coldstream
SCALE 1:500,000
Statute Miles
0
10
20
30

I. HISTORICAL DEVELOPMENT

During the period of Indian settlement, the South Thompson Valley was the main camp for the Salish Indians, whose homes, burial sites, etc. stretched along both sides of the entire South Thompson. These people have left many ancient sites, which have yet to be studied. These sites will shed much light on the prehistory of this region.

With the coming of the white man, the valley became an important transportation corridor - a role which it still has today. The first to use the valley were the fur traders, followed by the Canadian Pacific Railway and riverboat operators. Consequently, roads were built to link the settlements in the area. Currently, the valley is a transportation corridor for long-distance high-voltage power lines, telephone communications, the Canadian Pacific Railway and the Canadian National Railway, the Trans Canada Highway and a multitude of secondary roads.

The economic development of the area is characterized by a peak of economic activity in the 1940's and 1950's, followed by a period of slow decline until what now appears to be a period of gradual penetration of industry in the area again. Specifically, the first major land use in the valley was ranching, which dominated until 1910, when it was supplemented by mixed farming. The railway was also a supplemental part of the economy, with a section station at Monte Creek and another at Chase.

Before the days of rapid transportation and improved highways, roadhouses were located at Monte Creek and Pritchard. Acting in much the same fashion as gas stations do today, the roadhouses provided lodging, food and refreshments. In addition to the roadhouses, Monte Creek and Pritchard boasted general stores which served the local ranching economy.

Nearer Kamloops, at Campbell Creek, hop farming was a major industry until 1971, and truck gardening was important several years previous. Sawmilling, although not as prominant as in other areas, did provide additional jobs with a huge mill operated by Adams Lake Lumber Co. located at Chase for many years. Another mill was located on the south bank of the South Thompson River near Banana Island. This mill closed down in the late 1960's. A boxcar loading area for lumber located at Monte Creek closed down in 1974. In 1967 Canada Cement Lafarge Ltd. constructed a cement processing plant on the north side of the river at Campbell Creek. In 1974 Spun-Cast Industries, a concrete products manufacturer located directly across from Lafarge.

In summary, the nadir of economic activity in the South Thompson Valley appears to have passed. The Valley provides positive location factors for industry - relatively flat terrain; access to major transportation routes; availability of power and water; close proximity to markets in the Okanagan, the Cariboo, Alberta and Vancouver. With the tremendous growth of industry in Kamloops, the South Thompson Valley must therefore be seen as a prime site for the location of manufacturing industries.

II. LAND USE IN THE SOUTH THOMPSON VALLEY

A. Forestry Use

Extensive logging in the study area has been largely uneconomic due to the semi-arid conditions and previous logging which cleared out most of the commercial stands of Ponderosa Pine. Evidence of logging in the hills south of Pritchard indicates that this area has potential for second growth timber. Lodgepole Pine at higher elevations and Ponderosa Pine are cut for fenceposts by the ranchers in the area.

B. Agricultural Use

Agriculture is the predominant land use in the South Thompson Valley. The alluvial soils on the valley "floor" and the nearby silt terraces combine with the semi-arid climate to produce lush grasslands. Irrigation, feasible on the lower elevations enables ranchers and farmers to grow excellent forage and silage crops. At present, the high cost of pumping water to the terraces leaves them largely unsuitable for more intensive agricultural use.

The alluvial plain just west of Chase supports mixed farming (eg. wheat, hay, garden crops, dairying, beef) while along the rest of the South Thompson, irrigation supports a substantial hay crop. Corn is grown at Green Acres Farm on the north side of the river and near Monte Creek. On the immediate foothills open woodlands predominate and open grazing takes place. Ranch yard comprised of out-buildings and stock yards are scattered throughout the valley and it is here where stock is wintered and prepared for feedlots.

C. Residential Use

The total number of dwelling units in the study area is approximately 230 units, with 100 of these being mobile homes. Most of the dwelling units are centered around the Pritchard-Martin Prairie area and this is related to the growth rate in the number of postal users at the Pritchard Post Office. Figures compiled at the post office show 174 users in July of 1974, compared with 60 in 1972, and only 45 in 1966 - a growth rate in the last 2 years of 286%.

Other areas where dwelling units are clustered include a strip of homes immediately east of the boundary of Kamloops on the south side of the river, a string of homes on the north side of the river opposite Monte Creek, at Monte Creek and Shuswap, which is located 3 miles west of Chase.

It is important to note that the South Thompson area, because of its convenient proximity to the City of Kamloops, is subject to intense pressure for residential development. There are many lots which have been created by subdivision and are still vacant. These lots indicate substantial capacity for residential growth. Of course, new subdivisions add to this growth. Also, residential growth without subdivision may result from providing housing for agricultural use of lands.

D. Commercial Use

Commercial development in the study area includes 4 service stations, 2 campsites, 2 small stores and a coffee shop. Most commercial development serves the local population or travellers.

E. Industrial Use

Industry in the study area outside Kamloops is non-existent, at present. However, in the past lumber loading facilities operated at Monte Creek and a sawmill with associated booming grounds were located on the south shore of the river near Banana Island.

Near the study area, Lafarge Cement Plant and Spuncast Industries are located just inside the Kamloops boundary at Campbell Creek, and a gravel pit is located on the hillside, south of the Trans Canada Highway near Campbell Creek.

F. Transportation and Communications Use

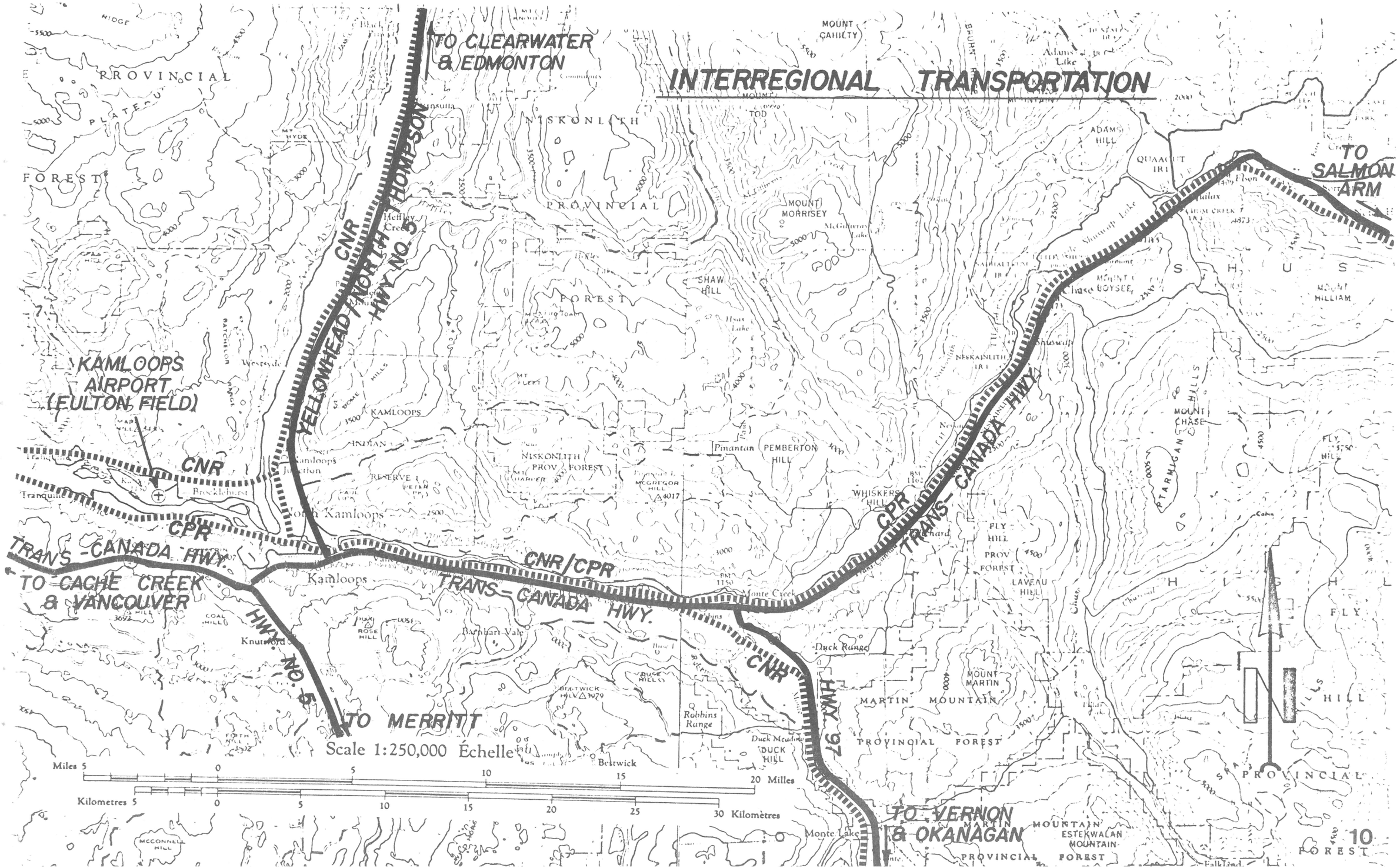
The South Thompson Valley has served as an important transportation and communications corridor since the 19th century. Formerly, the river was the first mode of transportation, but with settlement, roads and railways were constructed. The advent of hydro power has resulted in the valley serving as an energy corridor as well. Currently, the Canadian Pacific Railway mainline and the Trans Canada Highway run parallel to each other on the south side of the river, and the Canadian National Railway branches off the Canadian Pacific Railway mainline at Campbell Creek, and climbs through the terraces towards the Okanagan Valley. A power line runs along the north side of the river, with a second line branching off from this line near Monte Creek. Under construction is a trans-regional power line, linking Mica Dam and the Nicola Sub-station and this crosses the river in a north-south direction between Monte Creek and Pritchard.

G. Recreational Use

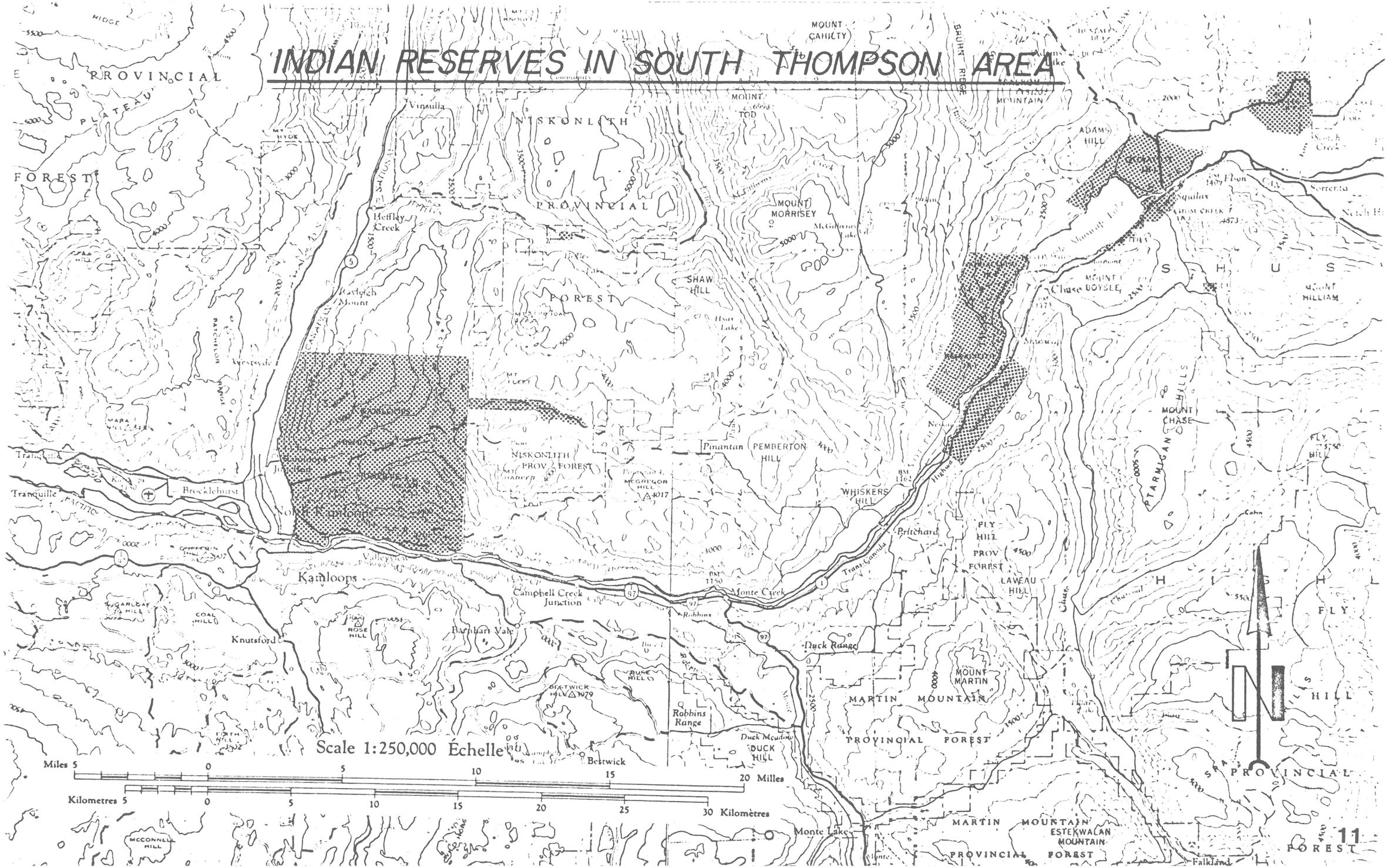
At present, only moderate use is made of the study area for recreational purposes. Present use includes swimming, boating, canoeing and fishing on the South Thompson River and at some nearby lakes, notably Niskonlith and Harper Lake. In the autumn and winter, hunting and rock climbing on Lion's Head, across the river at Monte Creek has been mentioned in the local hiking pamphlet entitled, "Hiking the High Points," but there is little to indicate that any extensive hiking takes place in the South Thompson area, at present.

H. Indian Reserve Lands

Except for the Kamloops Indian Reserves, development on bank lands in the South Thompson has been negligible. However, band leaders are very concerned with the economic future of their lands and in the future we can expect some development to occur.


INTERREGIONAL TRANSPORTATION
TO CLEARWATER & EDMONTON
YELLOWHEAD HWY. NO. 5
CNR
NORTH THOMPSON
TO SALMON ARM
KAMLOOPS AIRPORT (EULTON FIELD)
CNR
CPR
TRANS-CANADA HWY.
TO CACHE CREEK & VANCOUVER
CNR/CPR
TRANS-CANADA HWY.
CPR
TRANS-CANADA HWY.
HWY. NO. 5
TO MERRITT
CNR
HWY. 97
TO VERNON & OKANAGAN
Scale 1:250,000 Échelle
Miles 5 0 5 10 15 20 Miles
Kilometres 5 0 5 10 15 20 25 30 Kilomètres
PROVINCIAL FOREST
NISKONLITH PROV. FOREST
MARTIN MOUNTAIN PROVINCIAL FOREST
ESTEKWALAN MOUNTAIN PROVINCIAL FOREST
FLY HILL PROV. FOREST
Kamloops
North Kamloops
Monte Creek
Monte Lake
Barnhart Vale
Duck Range
Robbins Range
Pinantan
PEMBERTON HILL
WHISKERS HILL
LAVEAU HILL
MOUNT MORRISEY
MOUNT TODD
MOUNT CAHILTY
SHAW HILL
MOUNT CHASE
MOUNT MARTIN
MOUNT WILLIAM
ADAMS HILL
Adams Lake
Shuswap Lake
Chase
Brocklehurst
Knutsford
Tranquille
Westsyde
Pritchard
Falkland
10

INDIAN RESERVES IN SOUTH THOMPSON AREA



III. FACTORS AFFECTING RESOURCE POTENTIAL

A. Regional Setting

Much of the growth occurring in the South Thompson Valley originates from the City of Kamloops. Thus to understand the growth in this valley, we must look at the growth of Kamloops. We can assume that since the City of Kamloops is the dominant influence in the valley, that an examination of the development of Kamloops will shed light on the development of the valley.

B. Kamloops City

In the Kamplan report, it was noted that Kamloops was the existing established center and that "this in itself provides an incentative to further growth, since many regional functions such as personal service, administration, transportation and communications are already located here." As Kamplan further noted, "based on current transportation and communications technology, effective distance from major urban complexes such as Calgary and Vancouver has reinforced the dominant position of Kamloops in the interior region. It is apparent that the effect of these major cities, which could operate to reduce the role of regional centres, has been countered by the greatly increased local population and it cannot be anticipated that this importance will diminish while the economy of the region itself is maintained."

Consequently, if industry locates within the Kamloops boundaries, due to large tracts of serviceable land that is being made available, it is possible that pressure for development in the South Thompson Valley will take the form of residential development. Population studies indicate that the population of the City of Kamloops will have increased from 48,000 in 1971 to 87,000 in 1981 and 155,000 in 1991. One must assume that a great many of these people will seek the South Thompson Valley as a permanent home.

C. Economic

Residential development in the South Thompson would probably result initially in savings for homeowners in the valley to lower land costs and taxes. It would almost certainly however, represent a loss to the Kamloops region as a whole. Costs to the region would include the extra servicing that would have to be met (for example, schools, improved roads, installation of water and sewer, the construction of retail areas.) It would also include a loss of income for the City of Kamloops, which is relying on economies of scale from population size to bring down the per capita cost of City services. Hence, residential development can proceed in the South Thompson only at the expense of the City of Kamloops.

Servicing requirements in the South Thompson Valley would create a major demand on regional public works financing. Areas which change from rural to urban eventually reach a density where water supply and sewerage systems become necessary. Water is not always adequate to meet present needs in the valley. Sewage disposal in unstable soils could be hazardous. More road maintenance and extended school bus lines would be required. Each of these investments would be required in areas with major constraints creating major costs supported by levels of development far below optimal levels. This type of development on the peripheries in the past has already occasioned soaring taxes and capital budgets in the new City of Kamloops.

Pressure from industrial growth in the South Thompson Valley may be low as Kamloops offers a wide range of transportation and communications facilities, service and market outlets. However, industries which are so dependent on the above benefits in cost savings and are still attracted to the availability of water from the South Thompson, may locate on a proposed industrial park to be located on the Old Molson's Hop Farm near Campbell Creek.

D. Existing Development and Uses

Existing development in the South Thompson Valley includes homes, farms, commercial and industrial concerns, transportation and communication links. Since by far the most predominant land uses in the valley are agricultural, an increase in the stocks of the other physical resources may conflict with agricultural use and therefore lower the productivity of agriculture in the valley.

An increase in new commercial, industrial or residential development in the valley would to some extent be to the detriment of most valuable resources in the valley. The value of these developments would of course represent a monetary gain for the individual units of development themselves, but the to the valley as a whole, this type of development would result in a resource-use conflict with the most suitable resource uses that are present in the valley at this time, such as, agriculture, fish spawning, transportation and communication links.

IV. PHYSICAL BACKGROUND AND RESOURCE POTENTIAL

A. Geology and Landforms

The South Thompson Valley and surrounding uplands are a sub-unit of the Thompson Plateau. The Thompson Plateau is itself a sub-unit of the more extensive Interior Plateau. The South Thompson Valley is approximately 1,150 feet above sea level with the altitude of the plateau reaching between 4,000 and 5,000 feet above sea level.

The formation of the Plateau resulted from granitic masses, called batholiths, which were thrust up during the time that the Coast Mountains came into being. Continual erosion stripped off much of the rock covering the batholiths and filled the spaces between them, eventually producing a relatively flat surface. A renewed cycle of erosion triggered by a general uplift of about 2,000 feet, produced the basic landforms which exist today. The South Thompson Valley was deepened and the surface of the plateau was heavily eroded. Today, remnants of the more resistant parts of the batholitic structure, such as Lion's Head near Monte Creek can be seen in the study area.

During the Pleistocene or Glacial epoch, ice blanketed the study area to depths of 7,000 feet or more. While glaciation did not change the basic shape of the terrain, it resulted in a depositing of a layer of mixed clays, sands and gravels (glacial drift) over the bedrock on the plateau and meltwater impounded behind ice dams produced conditions for the formation of extensive valley terraces, marking successive levels of glacial Lake Thompson.

These step-like terraces or silt cliffs are known as Lacustrine deposits. They have become the most

conspicuous land form in the valley. These terraces lie at elevations from a few feet to several hundred feet above the river. The terraces extend along most of the length of the valley. They are often notched or split by tributary streams and gullies.

The terraces may be of several types. Most of the low level benches are remnants of relatively recent sediments left as a result of down-cutting streams or the flooding South Thompson. Others, particularly the light-colour silt terraces, are believed to be similar in origin to the white silts of the Okanagan Valley. They were probably deposited in ancient lakes by streams which washed fine material (rock flour) from nearby uplands.

The stability of these terraces has been questioned recently. Research has found that these terraces may be quite unstable if saturated with water. Gullying is already evident. In the Okanagan and in the South Thompson Valley there is evidence of subterranean tunnels and slumping occurring as a result of erosion. Landslides may occur under certain conditions. With the removal of vegetation and disturbance of the soil, dust may be gathered to the atmosphere and dust pollution may result. Homes built on these cliffs may be subject to settling and shifting foundations. This has already occurred in other areas of the Regional District where these soils are present. As a result, a report is being prepared by the staff of the Regional District.

On the valley floor itself, some of the land is on the flood plain. The South Thompson is prevented from serious flooding by the Shuswap Lake system, which acts as a giant regulator during runoff. It is probable that much of the valley floor is above the 50 year flood level. No flood plain mapping is currently available.

B. Soils

Soils in the South Thompson Valley are fundamentally of the Chernozemic (grassland) order. In general, the grassland soils are associated with the warm dry sites between the valley floor and 3,500 feet above sea level. Alluvial soils are situated where ground water may exist or where it is near the surface.

The grassland soils in the South Thompson are naturally useful for grazing, but when cropped, moisture in the form of irrigation water is usually necessary in order to ensure profitable yields. Brown soils are most commonly distributed in the lower terraces. Since these terraces are mostly protected from severely cold temperatures, they are preferred as winter range areas for livestock. When irrigated, brown soils produce high yields of forage and frost sensitive vegetables and fruit. Unirrigated brown soils are topped by a rather thin cover of native bunchgrass and may be easily overgrazed.

C. Agricultural Resources

The South Thompson Valley is a productive area for raising of cattle and with irrigation, substantial expansion in cropping capacity would be present. The soils in the area are adequate but the semi-arid climate creates a necessity for irrigation.

Currently, farmlands are rapidly developing and breaking up into smaller units. With continuation of this trend, it may be expected that land use conflicts will develop. Commuter traffic through farm country creates problems for cattle movement and control. Roads are demanded for moving machinery and moving passengers. What may be called nuisance work in urban areas, such as manure spreading, machinery noise, harvest and tillage dust, will require control. The question is a choice between desired development directions. The conflict is there. The question is which form of development should be encouraged.

D. Flat Land

That flat land is regarded as a valuable resource as seen in the residential and transportaion development that has taken place on the valley floor of the South Thompson Valley. At present, most of the flat land is taken up by agriculture, but as infilling in Kamloops is gradually utilizing the flat lands available in Kamloops, it follows that pressure to develop the flat lands of the South Thompson will increase. Therefore, if development did take place in the South Thompson, it would be to the full utilization of the value of the flat land. However, as indicated earlier, this may conflict with agricultural production in the valley and the rural lifestyle of the valley farming community.

E. Mineral Resources

Mining Claims

Name	Mineral	Property No.
Harper Ranch	Limestone	477
Riverside Goldfields	Au, Ag, Cu	4490
Buse Lake	$Na_2 CO_3$	4491
Buse Lake	Hydromagnesite	4492
Barnhartvale	Hydromagnesite	4493
Campbell Range	Hydromagnesite	4494

The only active mining that takes place in the South Thompson is the quarrying at the Lafarge Cement Plant. The fact that there is little mining in the South Thompson probably reflects the deficiency of the area in mineral resources. Therefore, mining in the South Thompson probably will not be a factor in future resource utilization of the South Thompson.

The quarrying that does exist at Canada Cement Lafarge Ltd. will affect residential development in the immediate area. The close proximity of the plant, although it emits little air, water or noise pollution, may bring down the value of the immediate area for residential development.

F. Climate

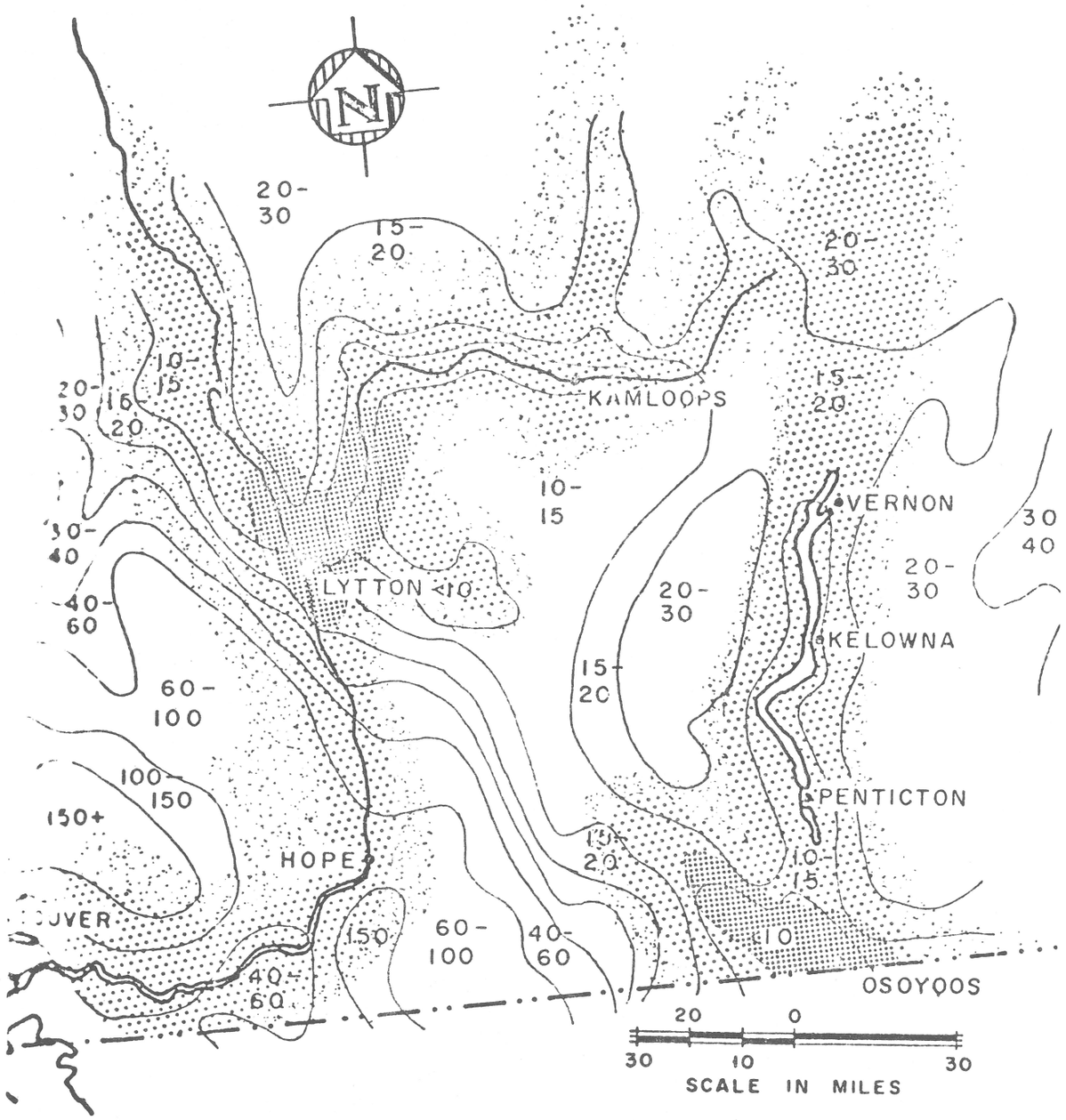
The climate of the South Thompson valley can be classified as semi-arid steppe. It is characterized by cold dry winters and hot dry summers. The main air mass influences are continental polar, maritime polar and occasionally, continental tropical.

Due to the protection of the Coast Mountains, the South Thompson is influenced by continental air masses. This results in an average January mean of 21.5°F. at Chase. However, the same continental influences result in relatively high July means of 70°F. at Kamloops and 67.7°F. at Chase.

The dryness of the region is attributed to the Coast Mountains creating a "rain shadow" over the area and most of what precipitation does fall is convectional, especially in the summer when frequent thunder showers occur. Precipitation figures for Kamloops are 10.3 inches a year and 15.67 at Chase, the latter increasing due to orographic uplifting caused by the Shuswap Highland.

The growing season is limited to the frost free days, which for Kamloops is 166 days. Although this time length would be sufficient for most crops, the potential harshness of the winters with temperatures dipping occasionally to -20°F., allows for only the hardier tree fruits to survive. In addition, the unpredictability of the first and last frosts rule out the commercial growing of the more tender field crops. Other characteristics of the summer growing season include an average of 848 hours of sunshine in Kamloops for the months of June, July and August. A typical summer day is sunny and hot with an afternoon temperature in the high 80°'s, a high frequency of heat-induced winds in the afternoon and a moderate possibility of thunderstorms in the evening.

CLIMATE



OVER 3500 DAY-DEGREES OVER 43° F

3000 - 3500 DAY-DEGREES OVER 43° F

2500 - 3000 DAY-DEGREES OVER 43° F

15-20 ISOHYETAL (Inches per year)

Source: City of Penticton, Water Quality Control (Dayton & Knight, Consulting Engineers) 1969

Precipitation during the summer months total 3.37" at Kamloops and 3.87" at Chase.

In the winter, if the area is being influenced by a maritime polar air mass, the days are often cloudy with little wind and an average temperature of near freezing. When arctic air masses prevail, as they usually do in full ferocity 3 or 4 times a year; the days are calm and sunny with temperatures frequently falling below zero at night.

Precipitation is mainly in the form of snow and the area receives a couple of feet or more a year. Snow melt occurs in spring creating high river water in that season. Summer, as mentioned above, is a season for thunderstorms and showers. There is limited rain fall in the valley otherwise. The total precipitation is generally in the semi-arid class.

The climate of the South Thompson must be regarded as an intangible but nevertheless important resource. Not only is the climate responsible for the unique vegetation and land forms that exist in the area, but it also counts as a tourist attraction as well. In addition, the relatively mild winters on the valley floor provide an amiable wintering environment for the cattle ranching industry.

G. Air Quality

Another intangible resource of the South Thompson is air quality. This is one of the characteristics of the valley that is associated with the scenic and aesthetic qualities of the valley. Usually, there is a prevailing westerly wind that leaves the valley clear of any pollutants. However, when high pressure related air masses predominate over the area, inversions frequently occur. This happens when the air mass above the valley is relatively warmer than the air mass in the valley. Since cooler air tends to remain nearer to the surface, little vertical wind movement in the air mass occurs; consequently, pollutants become trapped and the air mass may tend to become rather

smoky and hazy. This has been the Kamloops experience and it is conceivable that increased residential and industrial development in the South Thompson would deteriorate air quality in much the same way as it has done in Kamloops.

H. River Hydrology

The South Thompson River normally has its peak flows in the summer and low flows in the winter. This regime is occasioned by the source of the river in the melting snows of spring and summer. Flooding is partially controlled by the storage capacity of the Shuswap Lakes system, which maintains much more moderate fluctuation than in the North Thompson system. The river gradient is quite low, with a 8 to 12 foot drop over the 40 miles from Chase to Kamloops.

The river regime provides abundant water in summer for irrigation and water supply. Low water in winter could present problems if sufficient water is not present for dilution of nutrients added to the stream. In the memory of some residents, there are experiences of water dropping to very low levels, where the river could be crossed easily by fording. In the fall, water quality and water level are important as fish could be poisoned by pollutants or stranded in eddies by lowering water levels.

I. Water Quality

The quality of water for domestic and industrial use in Kamloops and within its hinterland, the success of the salmon run on the South Thompson and Adams Rivers, the well-being of the environment and the type and extent of recreational activities in the South Thompson all depend on the maintenance and continued high standard of water quality in the South Thompson River.

The water of the South Thompson River thus far is exceptionally pure and unpolluted. As a water supply resource, this water will yield greater and greater benefits, as the years pass.

The first priority is maintaining water quality for the City of Kamloops. Water used by Kamloops will have reached a peak demand of 125 cubic feet a second by 1994 (assuming Kamloops population is 150,000), while Weyerhaeuser will be using at least another 50 cubic feet a second. The South Thompson will continue to be the only feasible source of abundant high quality water. (The only other source is the Clearwater River - 80 miles away). Considering that flow in the South Thompson can fall to as low as 1,600 cubic feet a second, it is then important to regard the maintenance of water quality in the South Thompson River as an imperative in determining future land use in the valley. The importance of this water cannot be underestimated as the City of Kamloops proceeds toward its complete dependence on the South Thompson for its domestic water supplies.

J. Natural Vegetation

In the lower elevations of the study area, open grassland is the predominant vegetation type. Where conditions are favourable (ie. where sufficient soil warmth and moisture is available) the deciduous aspen tree may be found. As aspen exists in groves, they tend to serve as an oasis for cattle and wildlife in what would otherwise be a sea of grassland and sage. In addition to the native grassland cover, groves of yellow or ponderosa pine may be found below 3,000 feet. Other species found in the study region include the Douglas Fir, which is widely distributed, and at higher elevations, the common spruce becomes a major species.

Along the banks of the South Thompson cottonwoods and willows predominate. Apart from providing a protective habitat for aquatic life and wildfowl, the root systems of these trees serve to

protect the riverbank from erosion in periods of high-water.

Evidence of the above mentioned timber species being logged can be seen on the plateaux above the river. Many of the old time residents of the area believe that the forest cover is increasing due mainly to man's control of forest fires, which had served to keep the forest cover minimal.

The type of vegetation found on the South Thompson Valley floor is rare throughout Canada. Its semi-arid steppe character, with combinations of sage and grasses, are unique in this country.

K. Wildlife

1. Birdlife

The South Thompson River between Kamloops and Chase (until a recent shooting closure forced by river bank development) once provided some of the best late-season waterfowl hunting in the southern interior of Britich Columbia. Large numbers of ducks and geese annually use the river as resting, feeding and over-wintering areas. The South Thompson River is the most northern wintering area in the interior of North America for waterfowl. The waterfowl includes Whistling Swans, Canada Geese, Mallards, Barrows and American Goldeneye and a few American Widgeon (Baldpate). Present riverbank development is slowly destroying this waterfowl area.

Under the Canada Land Inventory Waterfowl Classification the South Thompson River is rated as 3M, which means that it is a valuable migratory route for waterfowl. However, various periodically inundated areas near the river are given the highest ratings of 1 and 2. Conversely, the valley walls and terraces are given the lowest rating of 7. (See Appendix)

* CLASS 1 — LANDS IN THIS CLASS HAVE NO SIGNIFICANT LIMITATIONS TO THE PRODUCTION OF WATERFOWL

Capability on these lands is very high. They provide a wide variety and abundance of important habitat elements; rolling topography is well suited to the formation of wetlands. Predominant water areas on these lands are both shallow and deep permanent marshes and deep, open water areas with well-developed marsh edges.

* CLASS 1S — Water areas in this special class are Class 1 areas that also serve as important migration stops.

* CLASS 2 — LANDS IN THIS CLASS HAVE VERY SLIGHT LIMITATIONS TO THE PRODUCTION OF WATERFOWL.

Capability on these lands is high but less than Class 1. Slight limitations are due to climate, fertility, or permeability of the soils. Topography tends to be more undulating than rolling; a higher proportion of the water areas than in Class 1 are small temporary ponds or deep, open water areas with poorly developed marsh edges.

* CLASS 2S — Water areas in this special class are Class 2 areas that also serve as important migration stops.

CLASS 3 — LANDS IN THIS CLASS HAVE SLIGHT LIMITATIONS TO THE PRODUCTION OF WATERFOWL.

Capability on these lands is moderately high, but productivity may be reduced in some years because of occasional droughts. Slight limitations are due to climate or to characteristics of the land that affect the quality and quantity of habitat. These lands have a high proportion of both temporary and semipermanent shallow marshes poorly interspersed with deep marshes and bodies of open water.

CLASS 3S — Water areas in this special class are Class 3 areas that also serve as important migration stops.

CLASS 3M — Lands in this special class may not be useful for waterfowl production, but are important as migration or wintering areas. This class has no subclasses.

CLASS 4 — LANDS IN THIS CLASS HAVE MODERATE LIMITATIONS TO THE PRODUCTION OF WATERFOWL.

Capability on these lands is moderate. Limitations are similar to those in Class 3, but the degree is greater. Water areas are predominantly temporary ponds, or deep, open waters with poorly developed marsh edges, or both.

CLASS 5 — LANDS IN THIS CLASS HAVE MODERATELY SEVERE LIMITATIONS TO THE PRODUCTION OF WATERFOWL.

Capability on these lands is moderately low. Limitations are usually a combination of two or more of the following factors: climate, soil moisture, permeability, fertility, topography, salinity, flooding, and poor interspersion of water areas.

CLASS 6 — LANDS IN THIS CLASS HAVE SEVERE LIMITATIONS TO THE PRODUCTION OF WATERFOWL.

Capability on these lands is very low. Limitations are easily identified. They may include aridity, salinity, very flat topography, steep-sided lakes, extremely porous soils, and soils containing few available minerals.

CLASS 7 — LANDS IN THIS CLASS HAVE SUCH SEVERE LIMITATIONS THAT ALMOST NO WATERFOWL ARE PRODUCED.

Capability on these lands is negligible or nonexistent. Limitations are so severe that waterfowl production is precluded or nearly precluded.

SUBCLASSES

With the exception of Class 1 and special Class 3M, the classes are divided into subclasses according to the nature of the limitations that determine the class. The following subclasses are used to denote significant limiting factors that may affect either the waterfowl or the ability of the land to produce suitable habitat conditions.

* SUBCLASS A: aridity -- The limitation is an arid condition of the land or the susceptibility of the land to periodic droughts, which results in low pond water levels or premature drying of marshes in the breeding season.

SUBCLASS B: free-flowing water — The limitation is usually due to fast or excess water flow, which inhibits development of marsh habitat along the stream edge. It may also be due to a lack of flow through low-lying land, which results in habitat of poor quality.

SUBCLASS C: climate — A combination of adverse climatic factors may act to reduce favorable habitat and the production and survival of waterfowl.

SUBCLASS F: fertility — The limitation is insufficient nutrients in the soil and water for optimum plant growth.

* SUBCLASS G: landform — Poor distribution or interspersion of marshes or basins may be a limiting factor of the land and may prevent the development of optimum waterfowl habitat.

SUBCLASS I: inundation — The limiting factor is excessive water level fluctuation or tidal action, which adversely affects the habitat or the nesting success of waterfowl.

SUBCLASS J: reduced marsh edge — The limitations are topographic features that adversely affect development of optimum marsh conditions along the edge of water areas.

* SUBCLASS M: soil moisture — Poor water-holding capacity of soils, which adversely affects the formation and permanency of water areas.

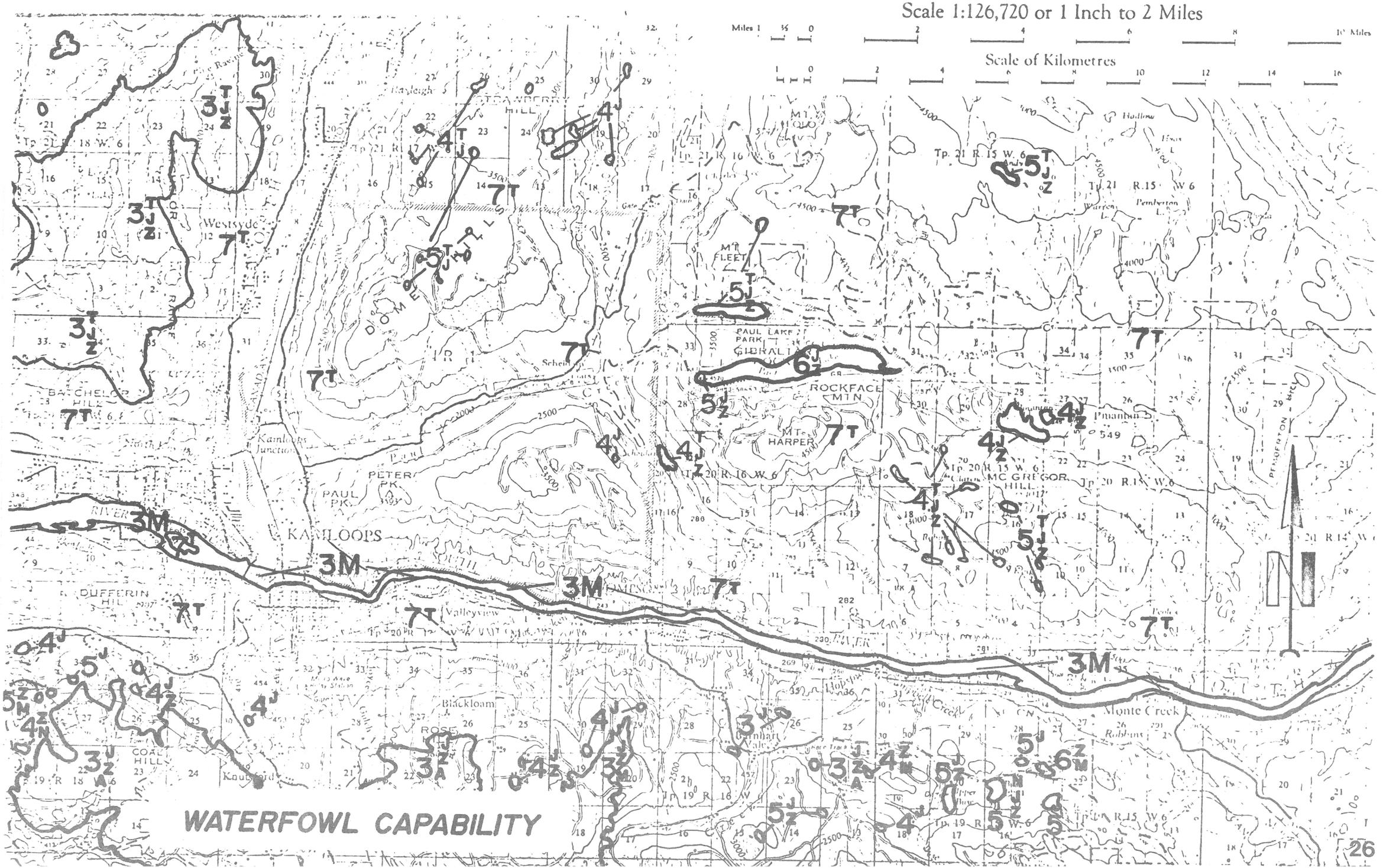
* SUBCLASS N: adverse soil and water characteristics — Excessive salinity, alkalinity, acidity, lack of essential trace elements, or abundance of toxic elements may limit the development of plant and animal communities essential for waterfowl production.

* SUBCLASS R: soil depth — Restriction of the rooting zone by bedrock or other impervious layers may limit development of suitable plant communities.

SUBCLASS T: adverse topography — Either steepness or flatness of the land may limit the development or permanency of wetlands.

SUBCLASS Z: water depth — Excessively deep or shallow waters limit the development of optimum waterfowl habitat.

LEGEND FOR WATERFOWL CAPABILITY


Scale 1:126,720 or 1 Inch to 2 Miles
Miles
Scale of Kilometres
WATERFOWL CAPABILITY
KAMLOOPS
Westsyde
Valleyview
Barnhart Vale
Monte Creek
Blackloam
Knutsford
Pinantan
Tp. 21 R. 15 W. 6
Tp. 20 R. 15 W. 6
Tp. 20 R. 16 W. 6
Tp. 19 R. 16 W.
Tp. 19 R. 15 W. 6
MC GREGOR HILL
ROCKFACE MTN
MT. HARPER
MT. FLEET
PAUL LAKE PARK
GIBRALTAR
DOME
PETER PK
PAUL PK
DUFFERIN HILL
BAR CHELOR HILL
STRAWBERRY HILL
COAL HILLS
RIVER
3M
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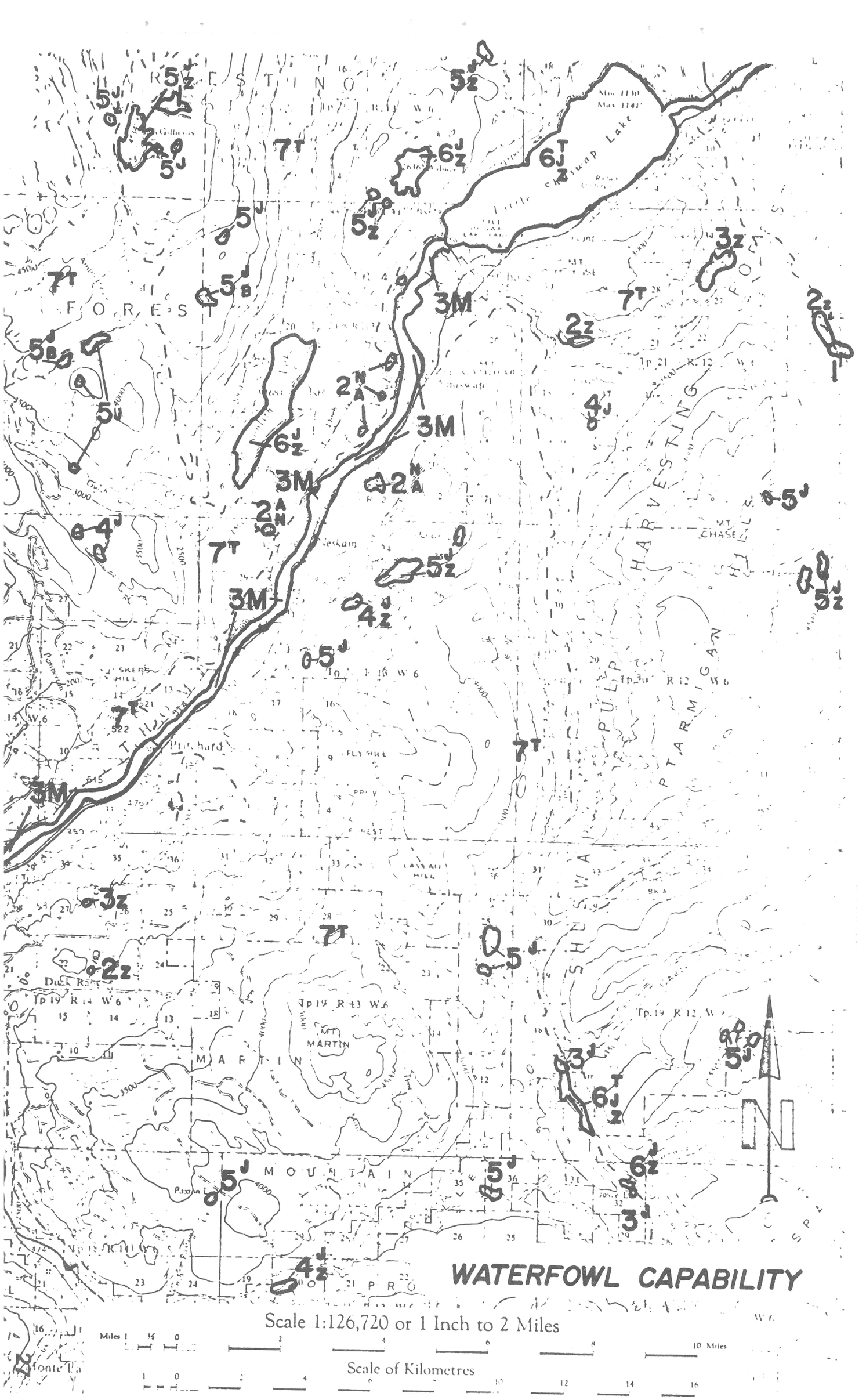
4J
3J
6J
26



WATERFOWL CAPABILITY

Scale 1:126,720 or 1 Inch to 2 Miles

In the summer the cottonwoods and willows become the nesting, feeding and rearing area of a large number of passerine birds, a few waterfowl such as wood ducks at Pritchard, mallards and common mergansers in scattered locations, and a number of species of shore birds such as killdeer and sandpipers. Also a pair of rare Anatum Peregrine Falcon use part of the river area as a food source.

On the upper benches sharptailed and willow grouse can be found in the grasslands and aspen habitat respectively. The introduced chukker partridge can be found on the claybanks and rough topography below timber line; many passerine birds and raptors such as sparrows, meadowlarks, bluebirds, horned larks, short-eared owl and red tailed swainson, and marsh hawks in the open areas; and warblers, catbirds, red-naped sapsucker, downy, hairy and Lewis woodpeckers and tree swallows in the aspen, willow sites. Bank and rough-winged swallows can be found around the claybanks. Some of the birds found on the lower timber sites (Douglas fir and Yellow Pine) are Western Tanager, White-winged and Red Crossbills, Clarks Nutcracker, Chickadee and Nuthatches.

2. Fishlife

The South Thompson offers an excellent, highly underrated sport fishery for rainbow trout, mountain whitefish and in fall months, Chinook salmon. Here, too, riverbank development is annually reducing opportunities for people to have access to or to use this resource. Opportunity for the public to have good access to the river throughout the year would add substantially to the economy of the area and to quality of life for all people in the valley.

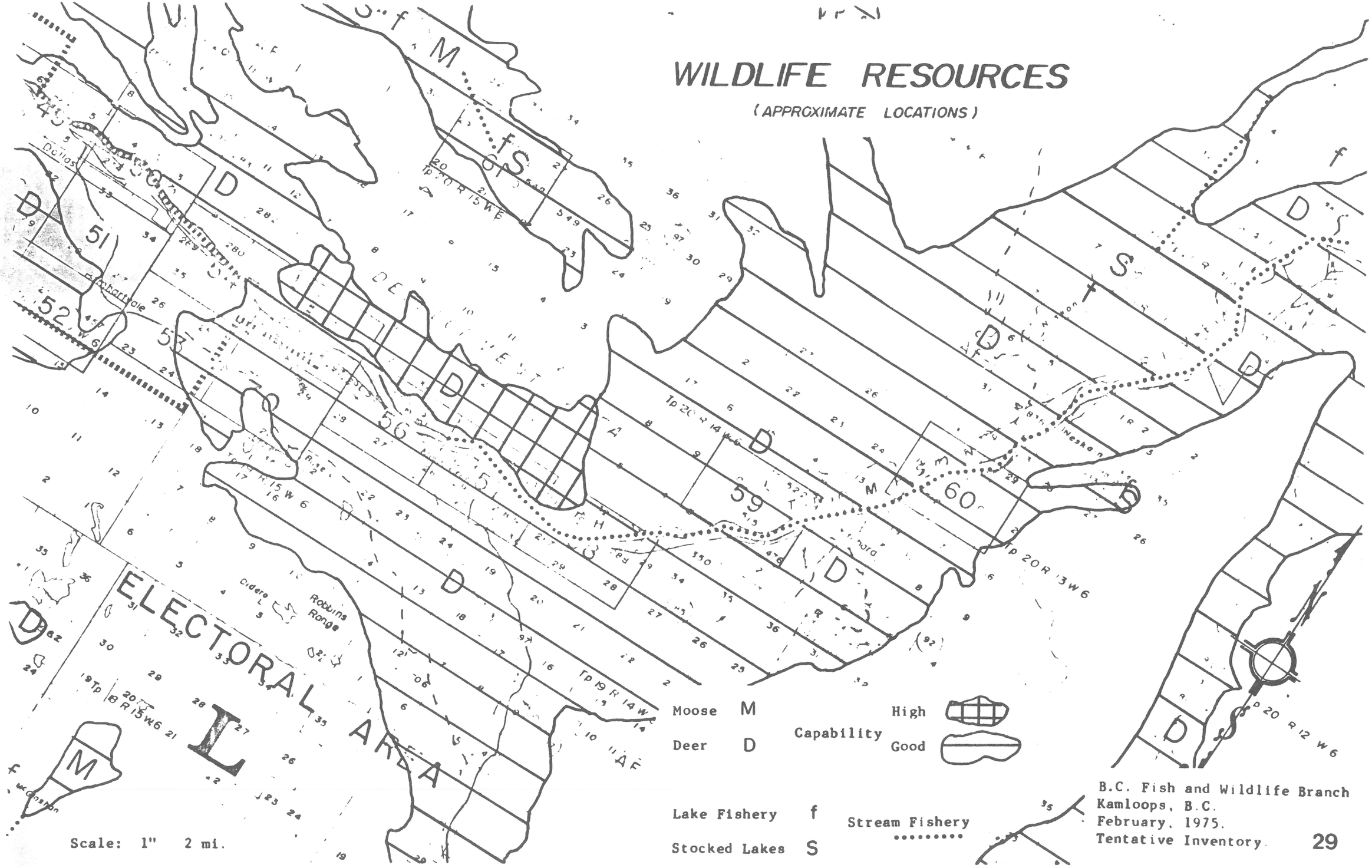
3. Animal-life

Furbearing animals found in and along the river are the mink, otter, beaver, muskrat, squirrel, bobcat, coyote and fox. Deer are the most important game animal found on the lower timber sites.

The value of wildlife resources would probably decline if the valley were developed along urban land use patterns.

WILDLIFE RESOURCES

(APPROXIMATE LOCATIONS)



Moose M

Deer D

Capability: High, Good

Lake Fishery f

Stocked Lakes S

Stream Fishery

B.C. Fish and Wildlife Branch
Kamloops, B.C.
February, 1975.
Tentative Inventory

L. Fisheries Resource

Of all the activities that take place in the study area, none offers greater economic returns than the Salmon spawning runs. The cardinal importance of this resource is too little recognized.

According to the Federal Fisheries Service:

"The South Thompson River as a major spawning grounds for chinook salmon is considered also as one of the most important areas of salmon spawning, migration as adults and juveniles, and rearing or growing areas in the province."

Establishing an estimate of the value of this resource is a very difficult task. However, research conducted by the Fisheries Service yield interesting and significant data. We shall look at this information below.

"There are 17 salmon spawning streams tributary to the South Thompson River. Also, there are several major lakes that serve as reservoirs and add to the extremely productive qualities of this system."

It should be noted that the majority of the South Thompson watershed is outside the Thompson-Nicola Regional District. On the other hand, all of the South Thompson spawners must pass through the main river, which is within the Regional District. Thus we are concerned with two values:

(1) The value of spawners in the waters of the Thompson-Nicola Regional District, and

(a) The value of spawners passing through the waters of the Thompson-Nicola Regional District.

Land uses in the South Thompson watershed would affect both.

Several species of salmon pass through the South Thompson. Below is a table comparing these:

	Approximate
Sockeye Salmon	over 1,500,000
Chinook Salmon	12,300 to 23,800
Coho Salmon	5,700 to 10,500

In the main river, the Chinook salmon is most significant. Chinook salmon escapements to the South Thompson River have ranged from 3,800 to 8,200 fish. The fish spawn in greatest abundance from the outlet of Little Shuswap Lake downstream for 4 miles, spawning then in lesser numbers in areas above Hoffman Bluff, upstream from Monte Creek, at Monte Creek, with lighter numbers ending at Campbell Creek. A rough estimate of the economic value of these fish using Fisheries Service formulae is between $260,000 and $360,000 annually from commercial value alone.

While these values are obviously high, they are greater augmented by the values of fish upstream. The value of the 1,5000,000 sockeye spawners of the South Thompson for 1974 are estimated at $15,500,000 to the fishermen and a total of $30,000,000 accrued, to the economy of the province.

These values are for commercial uses only. Thus the totals are raised further by looking at the recreational value. Also, there is value to the Indian population, who use part of the catch for their food supply. There perhaps could be some value accorded to salmon themselves over and above the "use value" of salmon. Perhaps this is the value the salmon held for the 100,000 and 125,000 persons who witnessed the 1974 salmon spawning phenomenon of the Adams River of the South Thompson Watershed.

"Because it is living, it is more vulnerable than any other resource to the carelessness of man. The Pacific Salmon requires from us only clean, cool water and undisturbed stretches of gravel in stream beds. It needs no fertilizing, feeding, spraying, pruning or coralling; its food is in the rivers and the sea. It is a self-renewing resource, requiring no vast areas of land or huge investments of capital to perpetuate itself. Treated with respect by its neighbours on the land lining its rivers and harvested with restraint, the salmon will last forever."

From: SALMON,
THE LIVING RESOURCE

In this regard, the residents and the different levels of government that affect the valley, must be seen as guardians of a resource for which they have to do relatively little work, except ensure that it has unspoiled environment. For this reason, any development in the South Thompson which may have a harmful effect on the salmon resource must be considered a negative development.

M. Water Based Recreational Resources

Water based recreational resources can include activities which are directly related to water (in either solid or liquid state), such as, water skiing or ice skiing, or it may be indirectly related to such activities as sight seeing.

Unfortunately, it is beyond the scope and limitations of this study to do an adequate recreation resource evaluation of the South Thompson Valley. It is, however, feasible to explore some of the implications future developments in the South Thompson might have on recreational resources, or what effect future recreational development would have on other development alternatives in the

South Thompson Valley. At present, the value of the South Thompson as a recreational resource is related to the rural nature of the valley. It can be assumed that development of a more urban nature (eg. houses, industry) will detract from the rural nature of the South Thompson, and therefore devalue its recreational worth for those who come to the valley for outdoor recreation or for those who live there. On the other hand, if residential development takes place in the South Thompson, the future recreational value of the valley may increase due to increased use. However, a gain by the residents of the area would be a loss for those who come from outside to enjoy the recreational value of the South Thompson Valley. It is, therefore, questionable whether the net recreational worth of the valley will have increased or not.

Conversley, recreational development would take place perhaps at the expense of water quality in the South Thompson River, the already overloaded Trans Canada Highway, the rural lifestyle of the valley and the fisheries resource in the lakes and streams. Of course, these probable losses depend on the nature and extent of the type of recreational use. Certainly cycling along the highway would not detract from the rural atmosphere of the South Thompson, whereas powerboating perhaps would. The extent to which recreational activity would add to the economy of the area, without causing any drain on the valley's existing resources, is worth a study in itself.

A main value of the South Thompson River for water based recreation derives from its low stream gradient. The South Thompson experiences a drop of 8 to 12 feet from Little Shuswap Lake to Kamloops. This means that canoeists and boaters can easily pass back and forth from the Shuswaps to Kamloops. With the recent surge in popularity of canoeing and with some lakes (Bowron Lakes) requiring reservations for time on the lake, this is a splendid asset of the River.

N. Land Based Recreational Resources

The South Thompson Valley is conveniently located within easy travelling distance from Kamloops and Chase. Its close proximity makes it ideal for approach by water craft, hiking, or bicycle. Having a low elevation and a warm climate it has tremendous potential as a summer resort area. With control of the types of uses in the valley, it has great potential for land based recreation with low facilities investment.

O. Scenic and Psychological Resources

Scenic and psychological resources are directly linked to the aesthetic and rural qualities of the South Thompson Valley. It is probable that a limited amount of development, be it industrial, residential, commercial or even recreational, will not harm this resource. However, it can be argued that since the South Thompson is the only relatively undeveloped major waterway accessible to the residents of Kamloops, its value can be measured by the costs it would require if the valley were developed and people had to travel farther away to enjoy the same amenities as they could in the South Thompson Valley.

It is conveivable that certain types of recreational development would enhance the psychological and scenic worth of the valley. These could be of a low facilities nature with accent on maintaining as natural an environment as possible.

The scenic quality of the valley is also greatly enhanced by the hoodoo-like landforms which stand out along most of the valley's length. The semi-arid steppe vegetation and climate are unique attractions of the area. A rural, unscarred atmosphere near a budding metropolis is indeed a unique asset.

P. Historic Resources

The whole sum of man's legacy, past lifestyles, customs and institutions can be understood and appreciated only if man's historical resources are properly maintained, studied and utilized. That this resource represents an invaluable means of attempting to understand our past, and perhaps our present and future as well, can be seen for example by the importance of analyzing the South Thompson's archaelogical resources in an attempt to correlate habitational changes with environmental change. In other words, the knowing of the past may be a means of deriving knowledge of future environmental changes and how they may affect future vegetation species in the valley.

1. Archaelogical Resources

The South Thompson Valley must be considered one of the richest areas of Indian archaeological sites in British Columbia. Although many of the sites have been completely or partially destroyed by industrial and residential development and scavenger "pothunters", several undisturbed sites remain. Many types of land use are to some extent incompatible with the objective of protecting these sites. In certain cases any disturbance, as in disturbance of Indian burial sites, for instance, is considered a great violation of sacred beliefs many Indians still possess. Archaeological sites are now protected by the Provincial Archaeological and Historic Sites Protection Act. Consequently, development in the South Thompson can not be legally allowed at or near an archaeological site, unless specific approval is given by the Provincial Government.

2. Historical Buildings

For the very reason that the stock of historical buildings in the South Thompson Valley is low, the existing structures should be given utmost protection by some level of government.

Presently the richest area of historical structures is the hamlet of Monte Creek. Formerly called Ducks, Monte Creek is the site of the original Bostock Ranch. The old recreation hall for the ranch hands still stands as the Monte Creek Community Hall. In addition, a rustic looking church situated above the Trans-Canada Highway dates back to the turn of the century. Several old houses which possess interesting architectural designs reflecting past lifestyle are still standing in this area. There is also the Monte Creek Railway Station, where British Columbia's famous train robber, Bill Miner, boarded the Canadian Pacific passenger train, "the Dominion", and rode it several miles to Campbell Creek before robbing the baggage car and then departing for the rolling hills and his Aspen Grove hideout. In other areas, there are more historic buildings including an old church in Westwold and a ranger station along the Salmon River Valley. A thorough inventory of historic sites in the region may be necessary prior to development of a preservation policy.

V. EXISTING GOVERNMENTAL POLICIES

The existing policies of the three levels of government in the South Thompson Valley are not as yet co-ordinated. Indeed, the policies for the study area herein proposed are not co-ordinated with the policies of the other Regional District in the Thompson-Shuswap Basin. Within the South Thompson Valley, however, certain consistencies between agencies are present.

A. Highways Department

The Department of Highways is quite concerned about leap-frogging development in the Valley and what effect this development has on traffic volumes. Since the Trans Canada Highway is classed as a major interregional highway, the Department has retained the policy of rejecting subdivision applications that would add traffic flow of a local nature to the Trans Canada Highway.

B. B. C. Land Commission

The policy of the B.C. Land Commission has obviously been to preserve farmland. Hence, it is seen that much of the South Thompson Valley is in the Agricultural Land Reserves.

C. Water Resources Service

The policy of the Water Resources Service is to require Regional Districts and Municipalities to adopt flood plain regulations in their zoning bylaws. Accordingly, the Regional District has amended its zoning bylaw applicable to the area. This bylaw now reads:

"211 Flood Control

Notwithstanding any other regulations in the Bylaw no building shall be constructed:

(i) within twenty-five (25) feet of the natural boundary of a lake;

(ii) within one hundred (100) feet of the natural boundary of any other natural water course or source of water supply;

(iii) on ground surface less than two (2) feet above the two hundred (200)year flood level where it can be determined, or if not, ten (10) feet above the natural boundary of a lake and any other natural water course in the immediate flood hazard area, provided that with the approval of the Deputy Minister of Water Resources, these requirements may be reduced."

D. Department of Recreation and Conservation

The Department of Recreation and Conservation has established a number of park reserves along the South Thompson. The policy is obviously to set aside lands for future public use.

E. Fisheries

The Federal Department of Fisheries and the Fish and Wildlife Branch of the Provincial Government have policies of close attention to the fish and wildlife environment of the South Thompson. These agencies are especially concerned with the extremely valuable fish runs up the South Thompson.

F. Other Provincial Agencies

In addition to the above, other provincial agencies have jurisdictional concerns. The Forest Service manages forest lands in the region. The Health Department is concerned with water quality and public health. The Pollution Control Branch has concerns regarding pollution.

G. The Archaeological and Historic Sites Protection Act

The Provincial Government has established this new Act to protect the priceless archaeological and historical heritage of the Province. During the summer of 1974, the Provincial Government in co-operation with the Regional District chose to thoroughly survey the South Thompson Valley in an effort to map as many sites as possible. Their work has resulted in a detailed report. The Provincial Government has powers to police these sites where necessary and control land use which may disturb sites.

H. The Thompson-Nicola Regional District

Previous to this document the Regional District has had no planning report on the South Thompson. This report represents the first look at development guidelines for the valley.

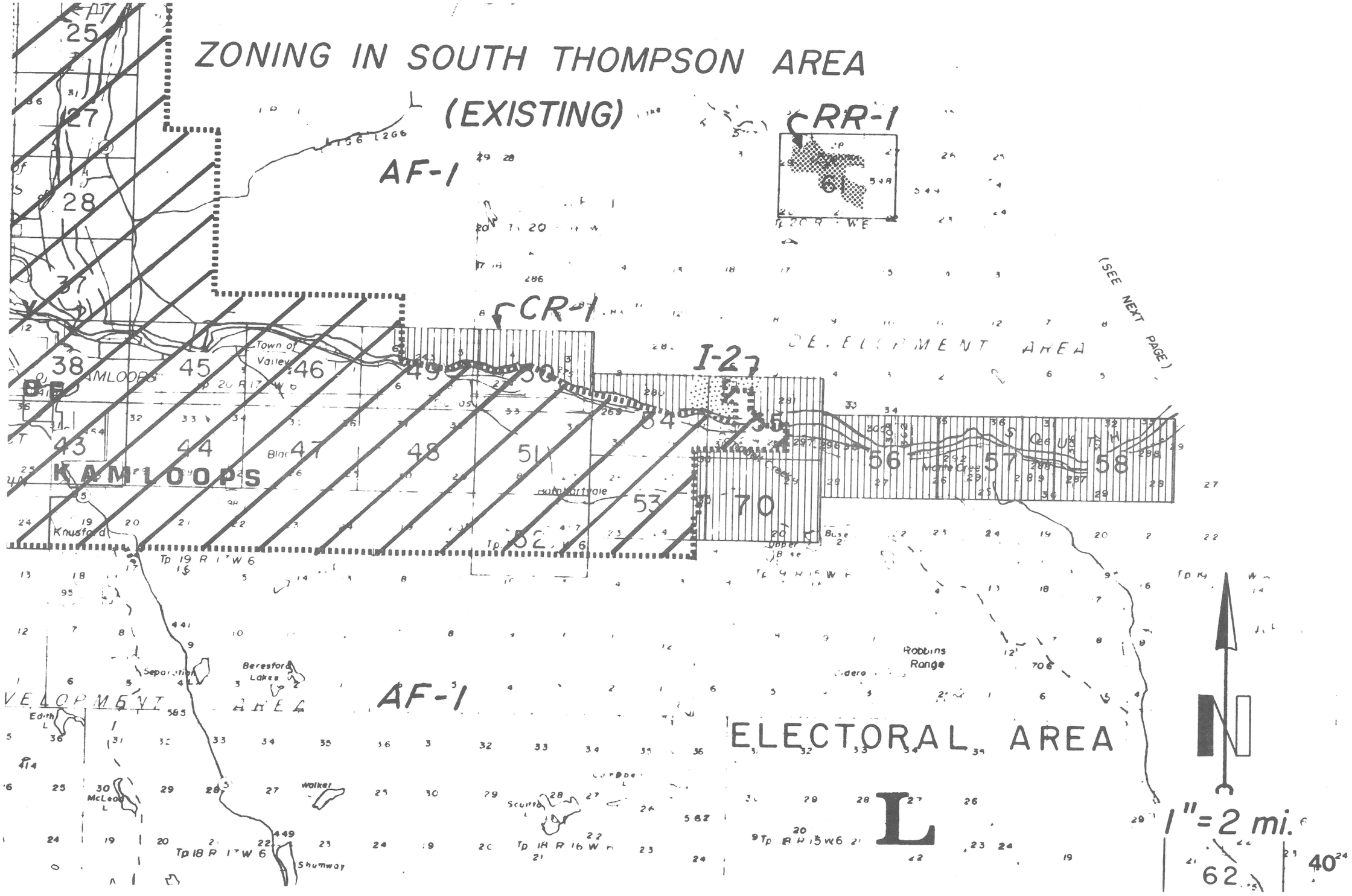
The Regional District has had a bylaw establishing zoning control since June 2, 1972 (Bylaw 57). This bylaw was intended as a measure to control development pending a more in-depth study of the area. The bylaw recognizes existing land uses and certain additional areas for development. The majority of the South Thompson Watershed is zoned AF-1 - a low density type of development with minimum lot size of 20 acres. Much of this land is in the uplands above the valley. On the valley floor, especially near Kamloops and Chase, we find large areas of CR-1 (Country-Residential)

zoning. This zoning is meant to provide for rural residential development. The minimum lot size is 2 acres, or development on the basis of one dwelling unit per 2 acres. It provides for a relatively low density suburban type atmosphere.

The Regional District Department of Planning has sought to develop an information base which would assist in guiding development. The Department has requested a report from the Federal Fisheries Service regarding the value and protection of the Salmon runs of the South Thompson.

ZONING IN SOUTH THOMPSON AREA

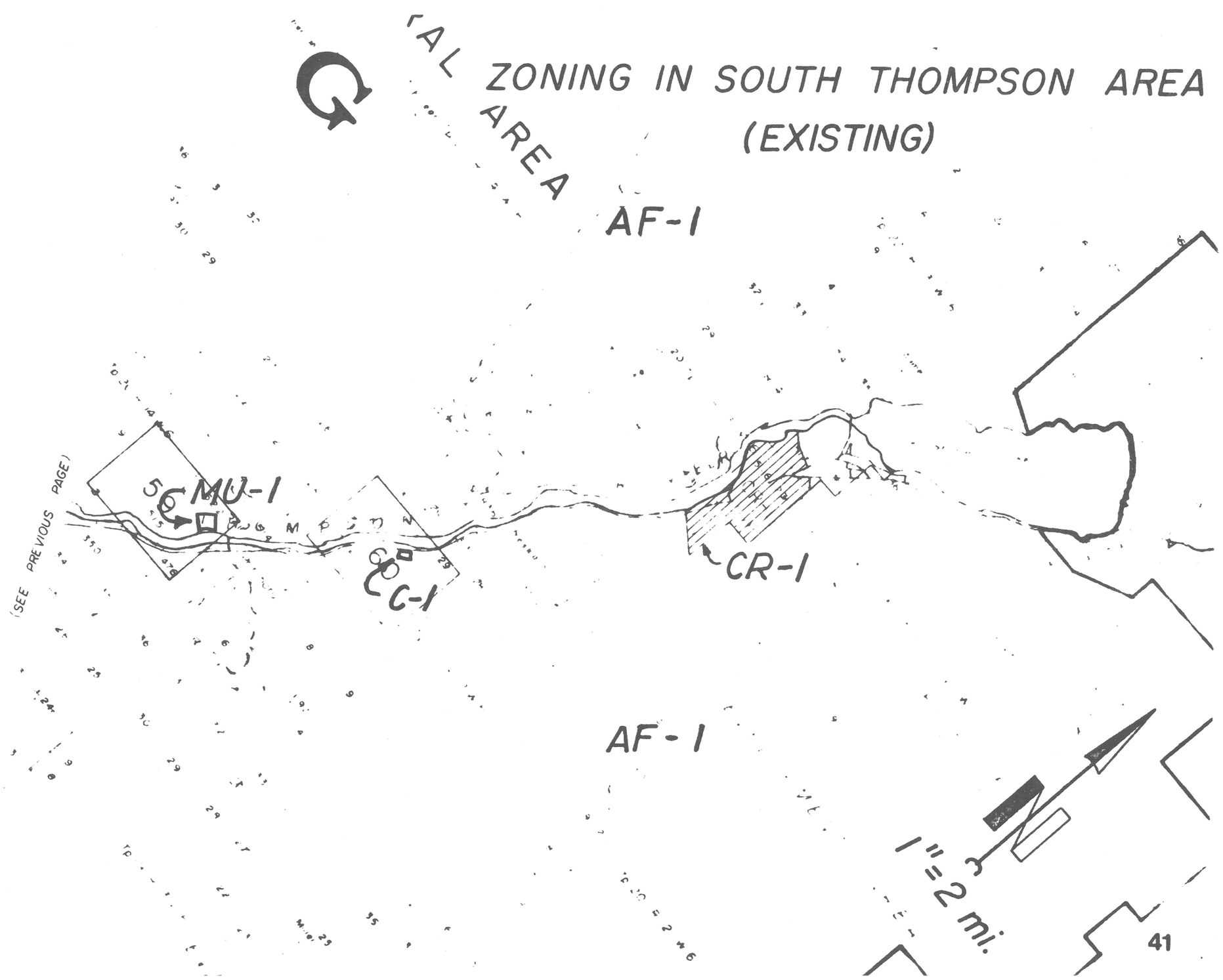
(EXISTING)



ELECTORAL AREA L

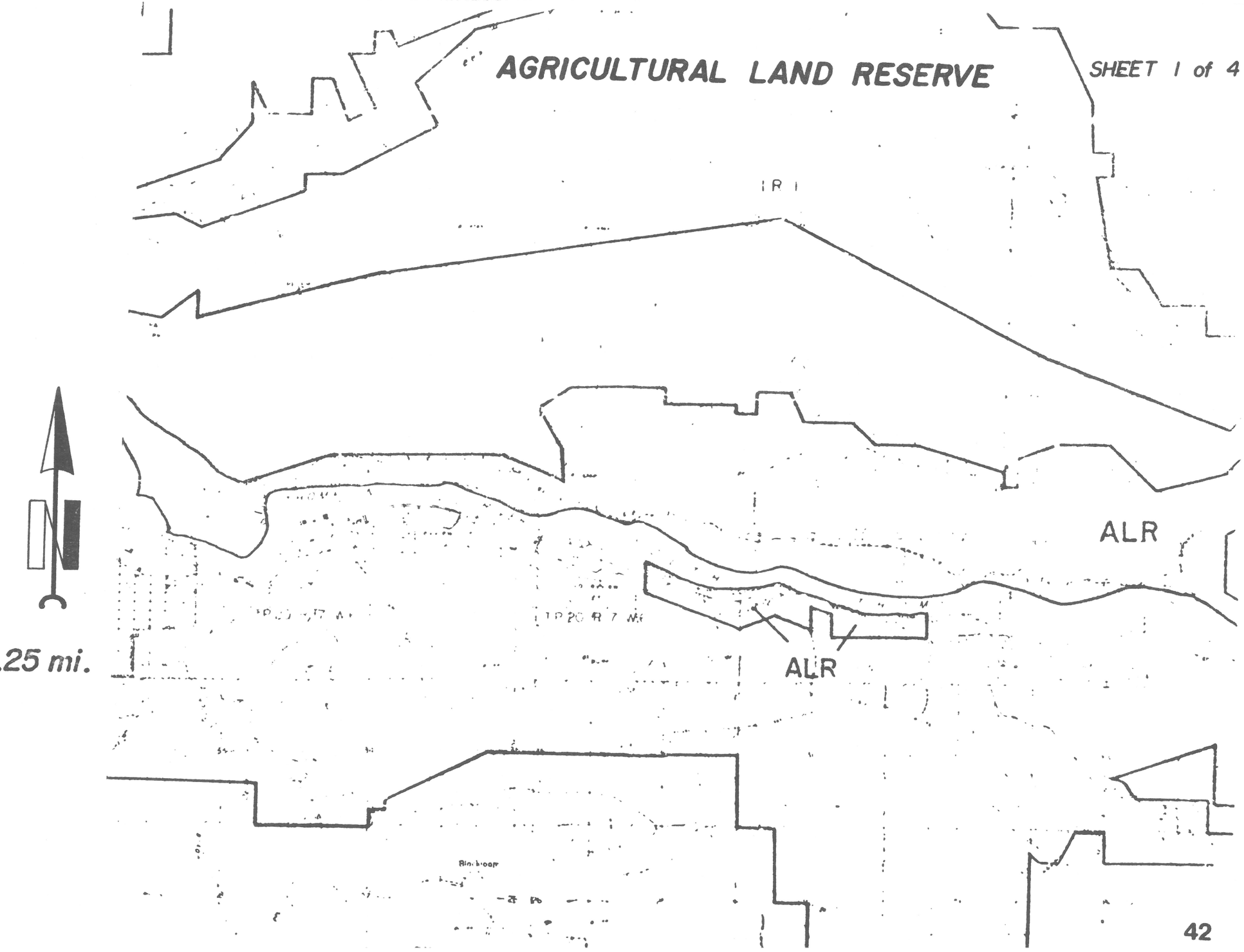
1" = 2 mi.

GENERAL AREA ZONING IN SOUTH THOMPSON AREA (EXISTING)



AGRICULTURAL LAND RESERVE

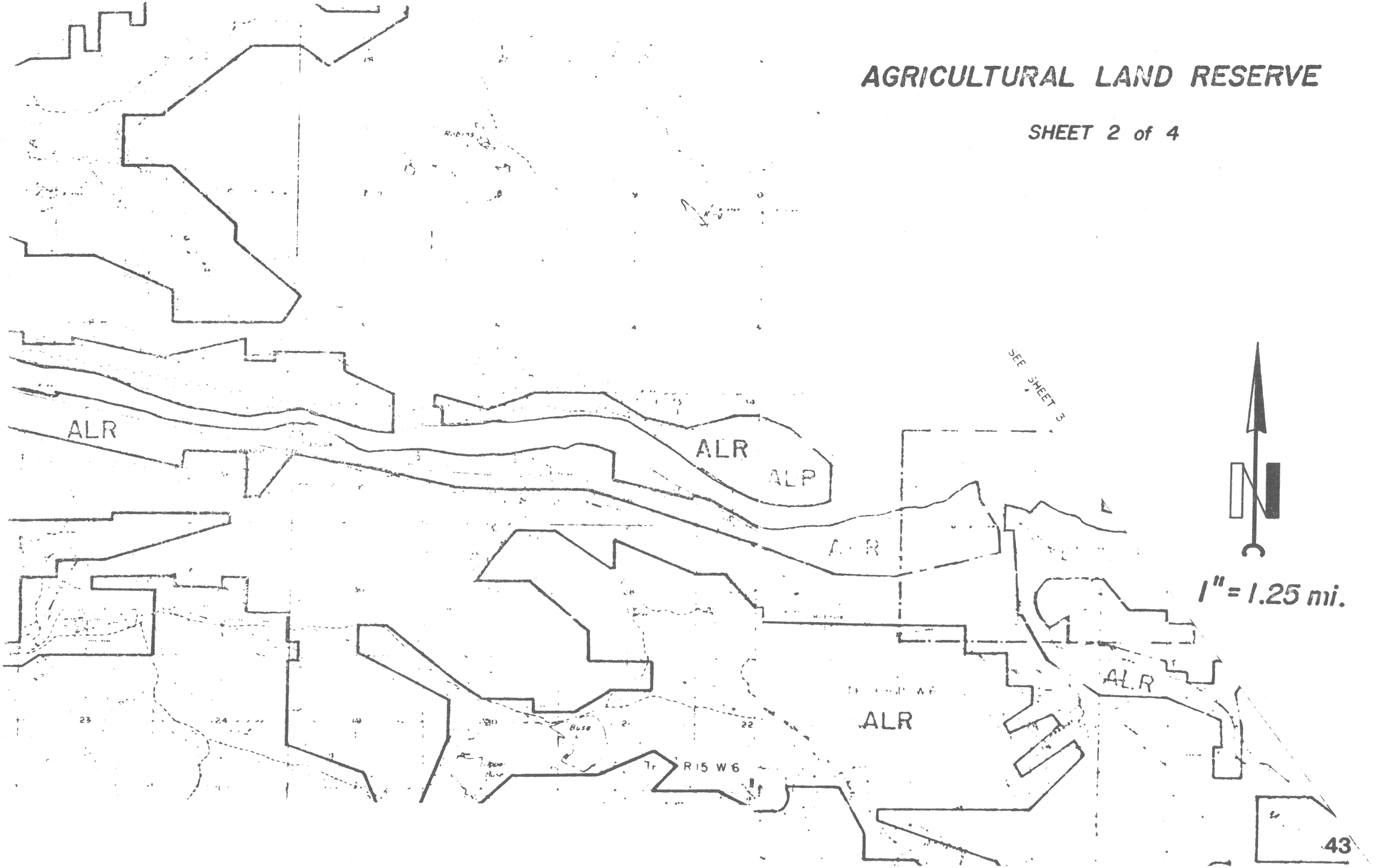
SHEET 1 of 4



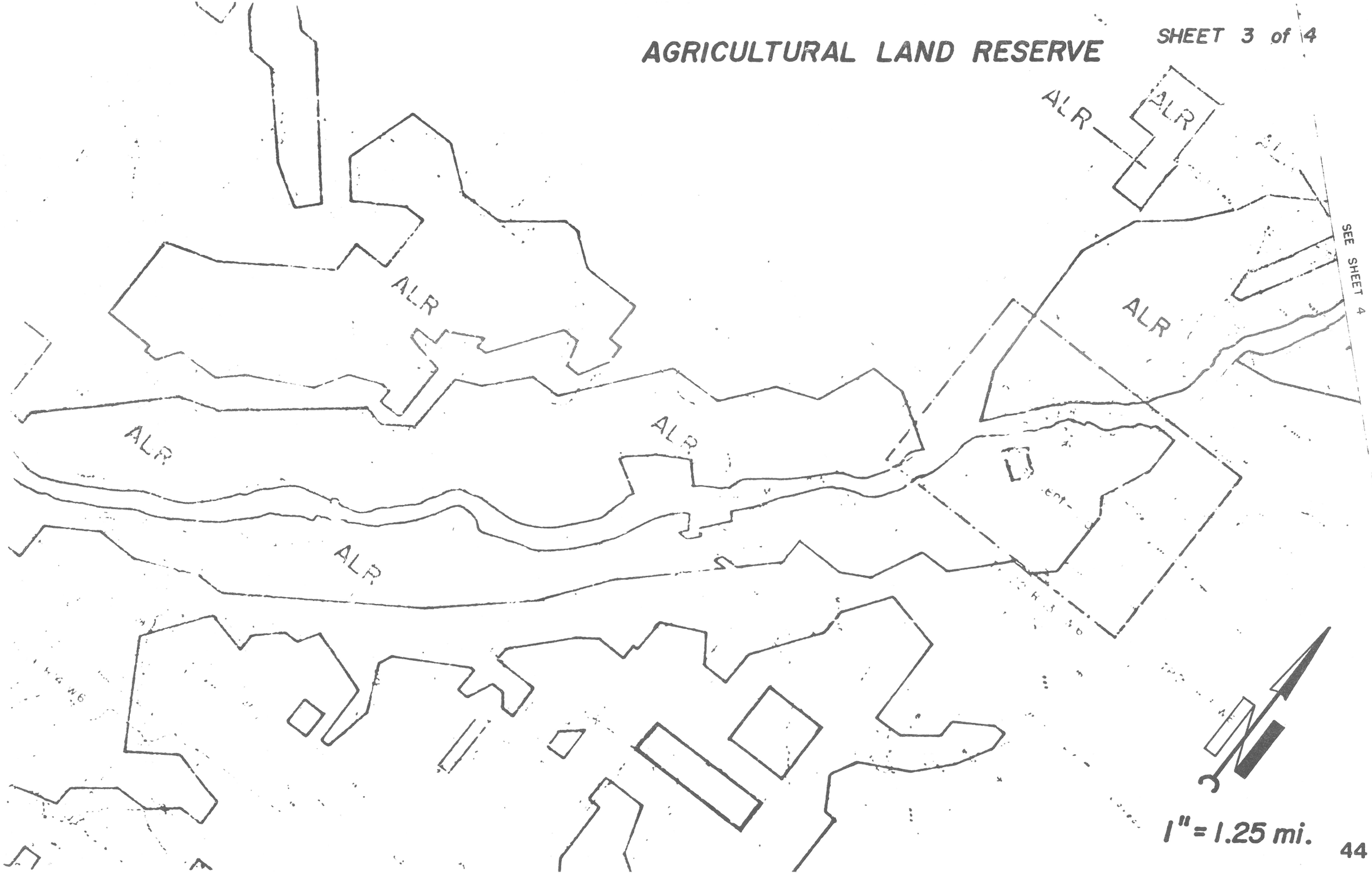
1" = 1.25 mi.

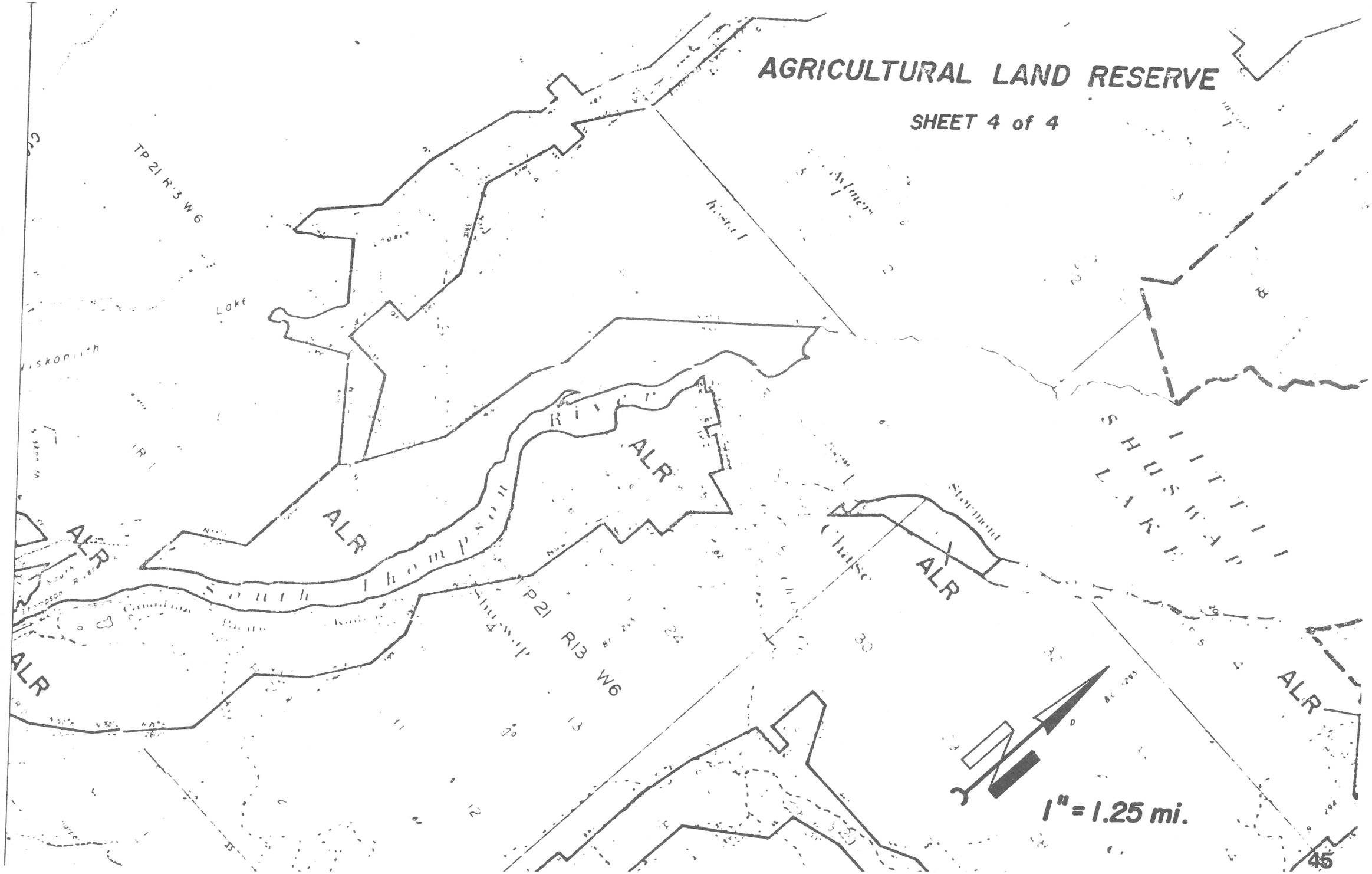
AGRICULTURAL LAND RESERVE

SHEET 2 of 4



AGRICULTURAL LAND RESERVE




AGRICULTURAL LAND RESERVE
SHEET 4 of 4
TP 21 R 3 W 6
LAKE
ALR
South Thompson River
P 21 R 13 W 6
SHUSWAP LAKE
1" = 1.25 mi.
45

PART II

VI. GUIDELINES FOR THE DEVELOPMENT OF THE SOUTH THOMPSON VALLEY

The studies above indicate an area of unique significance to the Kamloops region. The South Thompson Valley has great potentials for several uses. The Valley could be used for recreation, agriculture, industry, urban development or fish spawning. Given the nature of this resource, it is not possible to choose all of the above. Rather, it is apparent that there is high potential for conflicts among these uses. Some choices will need to be made. The paramount concern is to choose uses which will have the greatest benefit for the region. Clearly this will require recognition of the sometimes fragile nature of the local environment. The City of Kamloops depends upon this environment for water supply and recreation. The fish runs plying this stream are among the most valuable in the world. The high archaeological value of the area must be preserved. Meanwhile the delicate geology of the silt cliffs must be protected. Clearly any plan for the area must insure adequate attention to the most vulnerable nature of the valley and insist upon close scrutiny of each and every development proposal. In this view, it is clear that the most suspect forms of development are urban or residential development and industrial development. These should be discouraged.

THE GUIDELINES

The following guidelines are designed to preserve and enhance the values of the following resources:

- water quality in the South Thompson River
- fish resources (eg. migrating and spawning streams)
- agricultural resources
- historical and archaeological sites
- scenic resources
- recreational resources
- transportation efficiency of interregional corridor
- rural lifestyle of region
- wildlife resource
- delicate geological and biotic systems

Guideline I	That the Regional District study and establish guidelines for preserving the water quality of streams and lakes especially with reference to ground disposal systems.
Guideline II	That the Regional District establish a shoreline conservation zone and plan to preserve the natural environment of designated shoreline areas.
Guideline III	That no further residential subdivision and development be allowed in the South Thompson corridor outside the City of Kamloops, Indian Reserves and the Village of Chase.
Guideline IV	That further residential subdivision and development be discouraged in the South Thompson Watershed outside the City of Kamloops, Indian Reserves and the Village of Chase.
Guideline V	That no further industrial activities be allowed in the South Thompson Watershed outside the City of Kamloops, Indian Reserves and the Village of Chase.
Guideline VI	That no further commercial activity be allowed except as required by the local population (corner stores, service stations) in the South Thompson Watershed outside the City of Kamloops, Indian Reserves and the Village of Chase.
Guideline VII	That commercial recreational development be carefully controlled and closely planned in the South Thompson corridor outside the City of Kamloops, Indian Reserves and the Village of Chase.
Guideline VIII	That the Regional District acquire the power to establish regional parks, acquire or zone valuable historic and ecological areas, or in the absence of these powers, recommend to the Provincial Government the purchase or establishment of such sites. This would include the eventual purchase of

title or easements to much of the lands in conservation zones as they become available.

Guideline IX

That the establishment and design of provincial or regional parks be carefully controlled so that they would not create highway access problems or cause damage to the environment. Thus, these parks should be of day-use design only, and no power boat-launching facilities should be provided.

Guideline X

That further studies be conducted which would investigate proper land-uses and resources uses in the South Thompson Valley.

VII. SPECIFIC DEVELOPMENT PROPOSALS

The South Thompson River Valley is a unique resource presenting a unique opportunity for far-sighted planning. The type of development proposed herein is designed to accent the inherent potentialities of this stream. The overall concept is to preserve this stream in a relatively natural state. To do this will require co-operation on an unprecedented scale between public and private authorities, and between Federal, provincial, municipal, regional and Indian leaders. On broad terms, the proposal is to design a set of proposals which would allow the river to be used by the public, but preserved from damage either aesthetically or environmentally. The object would be to allow recreational development oriented to the river and its valley. The intended benefactors of this plan would be the future generations of regional inhabitants. In this respect it is appropriate to remember that when the City Council of Vancouver, B.C., met for the first time in the 1880's, it had as its first order of business the creation of a park on certain lands on the fringe of the city. This park later became known as Stanley Park. It is to the undying credit of these early councilmen to have created a resource which grows in value with each passing year. While it is certainly not a proposal to preserve the entire South Thompson Valley as parkland, it is possible to design an integrated plan which would maintain it in a near natural state.

The course of future development would not be of a restricted nature. It would positively seek to capitalize on the natural assets of this great river for the benefit of all.

CONCEPT PROPOSAL I

A General Development Plan for the South Thompson Valley

The basic objective of a plan for the South Thompson Valley is premised upon the regional role of the valley. The valley is clearly a functional element of the Kamloops-Shuswap region. As such, the area has a regional responsibility to provide for the recreation, water supply, and environmental quality of the region. Clearly, the South Thompson River Valley cannot be allowed to deteriorate into an urban and industrial style of development. On the other hand, the very fertile valley cannot be removed from the economy of the region. It is important as an agricultural and recreational

asset. Thus, a plan for the area will necessarily give fisheries, recreational, water supply and agricultural use priority. These uses present a minimum of land use conflicts. These uses provide the maximum benefit to the regional and local communities as a whole.

CONCEPT PROPOSAL I-A
Zoning

It is recommended that all zoning affecting the South Thompson Valley within the Regional District be brought under immediate review.

(a) Land Use Zoning

The zoning respecting residential development should be reviewed and new zoning proposals submitted based on a policy of discouraging residential growth in the South Thompson Valley. This may be accomplished by changing most areas not now developed to Agricultural Forestry (AF-1) zoning. This zone should be modified to exclude any establishment of commercial recreation facilities.

(b) Flood Plain Zoning

As part of this review, the provisions respecting flood plain zoning should be updated in light of the experience of the Regional District with respect to flood plain zoning. Mapping should be requested on a priority basis from the provincial government.

(c) Conservation Zoning

The Regional District should establish a Conservation Plan and zone to include provisions for the protection of aesthetic, environmental, historic or other values in the public interest.

CONCEPT PROPOSAL I-B
Conservation Areas

It is proposed that the Regional District study areas where conservation is essential and propose policies for implementation. An example of areas requiring attention are the South Thompson shorelines, the silt cliffs overlooking the river, fish spawning areas and certain tributary streams.

It is clear that co-operation with Provincial and Federal agencies in this regard is the only effective approach. The Regional District should endeavor to create a spirit of co-operation necessary to perceive signs of injurious activity and deal with them on a co-ordinated basis.

CONCEPT PROPOSAL II

A South Thompson Greenway and Chain Park

The basic objective is the preservation and enhancement of the river's natural environment and aesthetics while at the same time encouraging the widest possible recreational opportunities in a way which injures no one and benefits all. This may be done without harm to the legitimate requirements of industry and agriculture.

The objective of total preservation is impossible, uneconomic and unwise.

It is not the intention of creating a continuous park. This would undermine agriculture, tie up park and recreation funds, and create parkland far in excess of management and use capacities. Therefore, the concept of a continuous park is replaced by one of a series of intermittent parks, with protected natural space in between. These parks would become a chain of nodes offering access to the river and space.

The advantages of this scheme are several. First, the proposal would involve purchase of title and easements and would not necessarily involve large scale land expropriations, thus supporting private land rights now held by residents of the valley. Development would be phased to allow rights to first offer purchase by government authorities at time of sale.

Second, the proposal would allow purchase according to a phased plan, thereby eliminating the need for large initial expenditures.

A precedent for a programme such as this, is the programme of the City of Vancouver to purchase lands fronting English Bay near Kitsilano. Another North American precedent lies with the Willamette River Greenway proposal of the State of Oregon. These proposals are phased programmes for the development of shoreline resources.

Elements of the South Thompson Greenway and Chain Park are discussed below.

CONCEPT PROPOSAL II-A

South Thompson River Park and Community Gardens

(a) River Park

That a day-use regional park be established on the north side of the South Thompson River, approximately 1 mile west of the Canada Cement Lafarge Ltd. plant with provisions for a community garden to be developed for the residents of Kamloops.

This site contains many Indian "keekwillies" and cache-pits and is gradually being destroyed by "pot-hunters." There are poplar trees which provide natural shading and natural grasses abound, giving the site an oasis look amidst the dry desert hills. The river bank is gently sloping and it would take little sand to make a fine beach.

In addition to this, the white silt terraces on the valley walls could be developed for hiking trails and natural walks. The park itself could be developed as a swimming and picnic area and its location 12 miles from Kamloops centre could make it an important terminus for a cycling route from Kamloops on the north side of the river. A caretaker in the summer would ensure the protection of the archaeological sites and park property.

(b) Community Gardens

On the same site community gardens could be developed. A community garden is a development where urban dwellers, who are unable to have gardens, rent equal size plots and cultivate vegetables or flower gardens. This idea originates in Europe, but has struck root in Richmond and Saanich this summer, where the plots were all rented the first day they were advertised. In a follow-up television news report late last summer it appears that most people who rented the plots were extremely satisfied with the project.

Since Kamloops now has many families who have no chance for a garden it seems likely community gardens would be a success here. The combination of garden and riverside park set amongst the site of an ancient Indian village would seem to be a creation of an ideal "people place" - a place where people could come to relax, tend a garden and watch the river flow by - with a minimum of environmental interference and a suitable utilization of the resources already there.

CONCEPT PROPOSAL II-B
Conservation Areas

(a) Monte Creek

The area north of the Canadian Pacific Railway from where Monte Creek enters the South Thompson River to just east of Monte Creek Community Hall, including the church on the south side of the Trans Canada Highway must be considered a threatened area if it is not included in the Agricultural Land Reserve and adequate zoning. This area contains valuable historic buildings (eg. community hall, church). It is of excellent agricultural value, a waterfowl and wildlife refuge, and most importantly, the vegetation supported by Monte Creek protects a gravel bar which is considered by the Fisheries Service of Environment Canada to be valuable salmon spawning area.

Therefore, it is recommended that no development of any kind be allowed in this area and that parts of this area be purchase by the Provincial Government and placed in a greenbelt or recreation reserve. Remaining parts with high agricultural potential be included within the Agricultural Land Reserve.

(b) Waterfowl Area

An area situated 2 miles east of Canada Cement Lafarge Ltd., on the north side of the South Thompson River is proposed as a waterfowl area. Topographically, it is an ancient river meander and ox-bow lake in flood season. For these reasons, it supports a sizeable waterfowl population. There are several Indian sites on the site. There is a substantial poplar and birch forest. This area could become an integral part of a riverbank hiking trail system. Hence, some development such as picnic tables and sanitary facilities could be allowed there. Therefore, it is recommended that the Provincial Government be asked to purchase this area for a conservation or park reserve.

(c) Other Areas

Several other areas offer unique assets for the purpose of this proposal. These may become available for sale at some later date. A list of desired areas should be mapped and proposed to the purchasing authorities from time to time as sites and finds become available. The greenway and chain park proposal should be considered a dynamic proposal, subject to development over a long range period.

CONCEPT PROPOSAL II-C

Canoeing, Hiking and Cycling Routes

It is proposed that an integrated trail system be developed along the entire South Thompson River. This trail would involve a set of trails integrating the elements of the Chain Park with each other. The initial stage would involve the posting of park reserves and purchase of chain park areas proposed above, and providing them with supervision and facilities for a canoe trail from the Shuswap Lakes to Kamloops Lake. Use of the river entails no immediate costs in land purchase and a minor investment in facilities.

As soon as feasible, the co-operating authorities may proceed with the development of a system of hiking trails. This sytem would be based on mainstem trails along the river on each side coupled to interesting side trails such as the Lion's Head Trail, Mt. Paul Trail (with Indian Band co-operation), and Peterson Creek trail (with City of Kamloops co-operation). Camping facilities could be developed at the appropriate stage in the development.

Finally, in recognition of the need for more bicycling trails in the area, a system of bicycle trails should be developed. The system could be developed initially along secondary road systems and later extend to other areas.

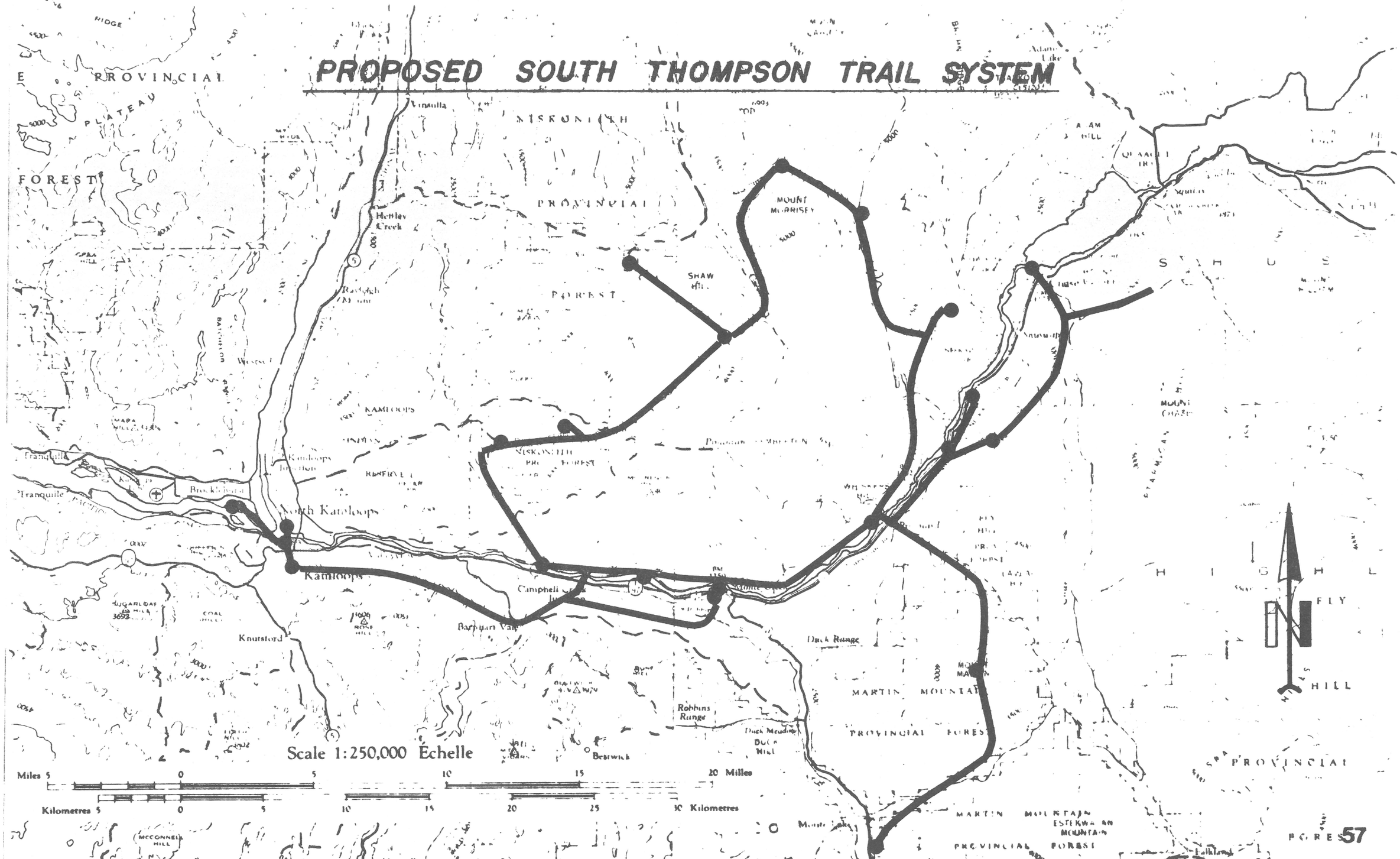
In each case, the construction of trails may proceed as routes can be made available. In areas where land is owned by the Crown, application for use may be made to the Lands Department or other appropriate agency. In areas where park reserves or other public use reserves exist, appropriate use authority may be obtained. In some of the area, shoreline trails may be established below the high water mark. However, this should be discouraged in that the high water mark peaks normally occur during the summer when the demand is highest. In certain cases where land is in private hands it may be possible to purchase easements for purposes of providing trails or preserving shoreline features. Finally, in certain cases purchase may be studied.

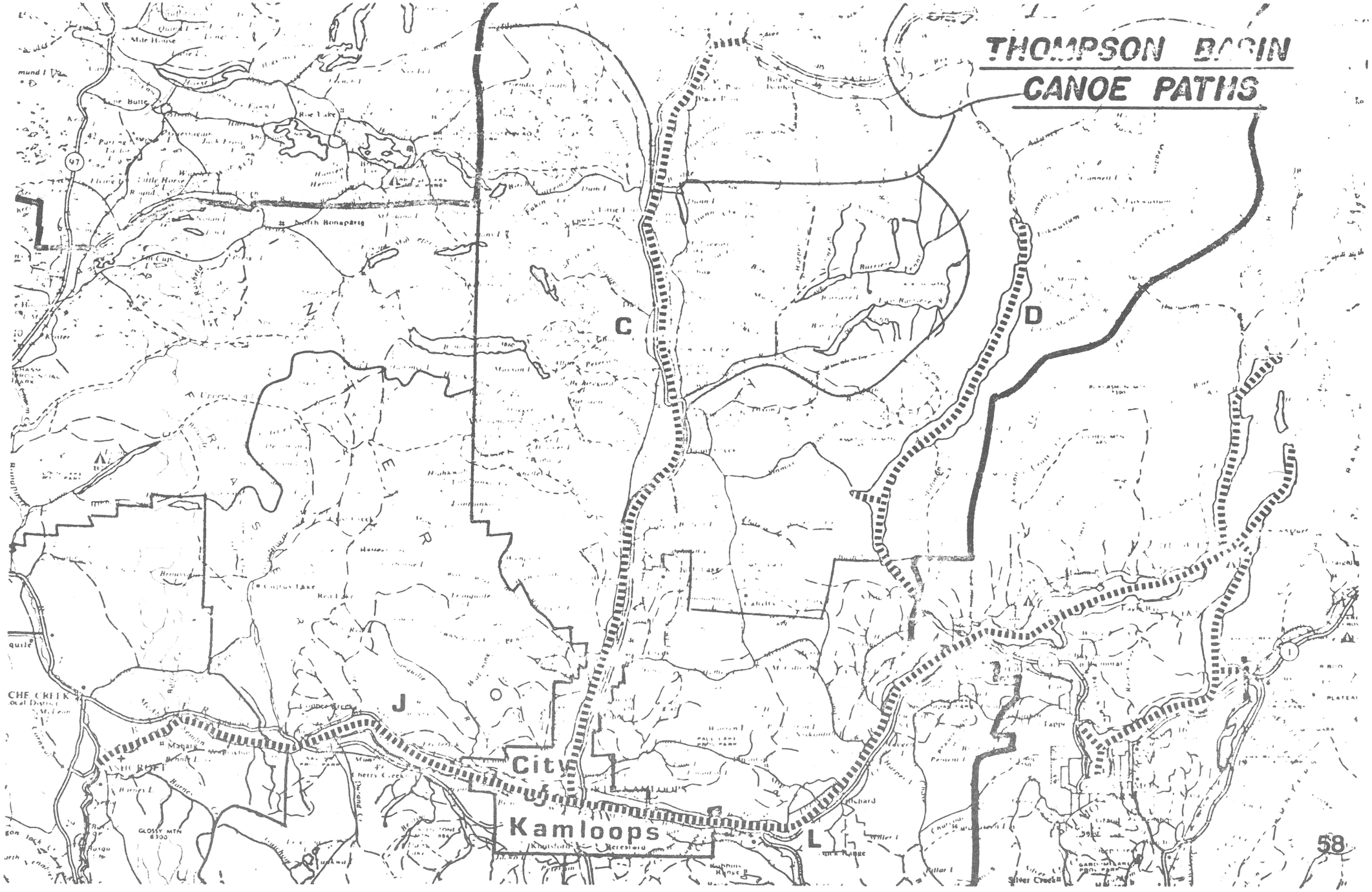
CONCEPT PROPOSAL II-D

Development on Indian Reserves

The Regional District has no direct control over development on Indian Reserves. The three major reserves are the Kamloops Indian Reserve, the Niskonlith Indian Reserves, and the Chase Indian Reserves. The Niskonlith Band has indicated a willingness to establish a commercial recreation

PROPOSED SOUTH THOMPSON TRAIL SYSTEM




THOMPSON BASIN
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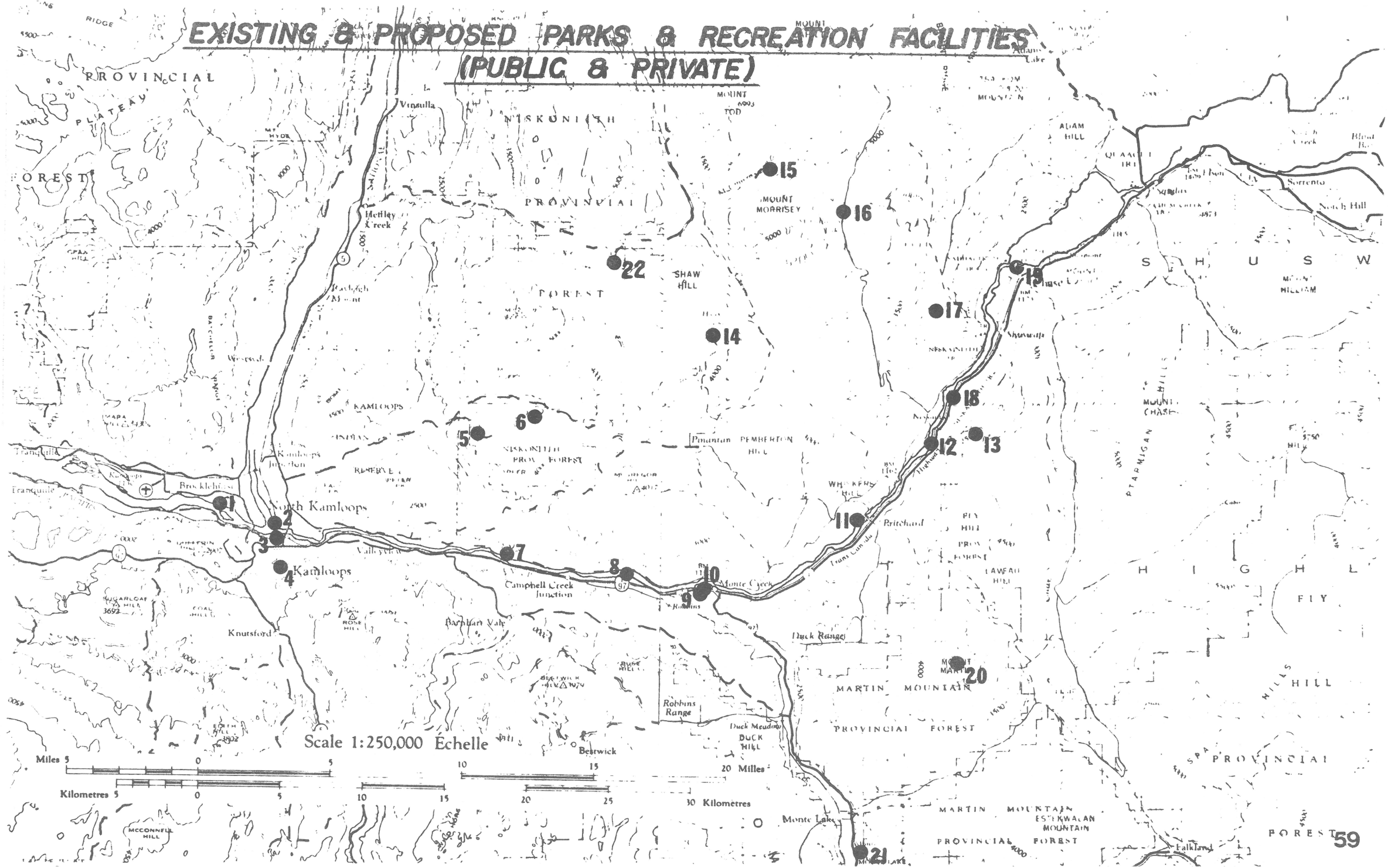
Silver Creek

EXISTING & PROPOSED PARKS & RECREATION FACILITIES (PUBLIC & PRIVATE)



EXISTING AND PROPOSED PARKS AND RECREATION FACILITIES

(Public and Private)

KEY TO MAP

1. MacARTHUR ISLAND PARK
   City of Kamloops

   Existing.
   A variety of recreation facilities of a land based nature. Sizeable area as yet undeveloped.

2. INDIAN POINT PARK
   City of Kamloops

   Existing.
   As yet largely undeveloped. Poor access from residential areas of Kamloops.

3. RIVERSIDE PARK
   City of Kamloops

   Existing and proposed.
   An urban park adjacent to downtown area of Kamloops and fronting on South Thompson River, with day use recreation facilities, including swimming, playground areas, ball parks, etc. Proposed developments include significant expansion of park to develop a civic centre complex with convention centre, etc.

4. PETERSON CREEK
   City of Kamloops

   Existing.
   A park preserving the Peterson Creek Canyon. Some rest and picnicking facilities and landscaped gardens. Largely undeveloped hiking trails.

5. PAUL LAKE ECHO LODGE
   Paul Lake

   Existing.
   A private development open in the summer and serving the fishermen of Paul Lake. Facilities include 2 dining rooms, 12 cabins and over 40 boats.

6. PAUL LAKE PROVINCIAL PARK
   Paul Lake

   Existing.
   A provincial park with fishing, swimming, camping (58 campsites) and picnicking (40 sites).

7. SOUTH THOMPSON RIVER PARK

   Proposed.
   Approximately 2 miles west of Canada Cement Lafarge Ltd. plant. Site contains dozens of keekwillies and cache pits of considerable archaeological value. There are some open fields (proposed for community gardens) and some environmental resources. Trees and shoreline make area ideal for community park. Site would involve 25 to 30 acres.

8. WATERFOWL, RECREATION AND GREENBELT AREA

Proposed.
Approximately 2 miles east of Lafarge Bridge on north side of South Thompson. Treed area with ancient oxbow of river filled with marshy area. The site possesses several archaeologically valuable spots.

9. IVAN'S CAMPER'S PARADISE

Existing.
Small private campsite on Monte Creek, just west of junction of the Trans Canada Highway and Highway 97.

10. MONTE CREEK/ RIVERSIDE PARK

Proposed.
A proposed site for purchase by park or greenbelt monies, and preservation. Site contains archaeological sites, spawning grounds (in adjacent river), mixed marshland and forest and some farmland. Access from the Trans Canada is poor, therefore, the site is proposed as river-oriented park and greenbelt.

11. PRITCHARD AREA

Existing and proposed.
Currently a very long and narrow park reserve exists along river front. Part of this park reserve could be developed by residents of local mobile home subdivision. A further portion could be developed for riverside park, perhaps expanded in width to allow rest and picnic facilities.

12. BANANA ISLAND PARK RESERVE

Existing.
A forested island currently under protection of park reserve.

13. HARPER LAKE PARK

Proposed.
A possible area for park development as side trip from South Thompson Trail System.

14. HYAS LAKE FISHING CAMP

Existing.
Small fishing camp on Hyas Lake, with several lakes in area accessible from camp.

15. TOD MOUNTAIN SKI AREA

Existing.
Internationally well known ski area.

16. McGILLIVRAY LAKE FISHING CAMP

Existing.
Small fishing camp at elevation 5,000, with cabins, boat rentals and launching, gasoline, snack bar, and supplies. Three lakes in area.

17. NISKONLITH LAKE PROVINCIAL PARK

Under development.
Park currently under development by Department of Parks and Recreation.

18. NISKAINLITH INDIAN RESERVE

Proposed.
Band leaders currently interested in labour. Intensive recreational development to provide employment and income for band members. Exact site development location and plans to be decided later.

19. CHASE MUNICIPAL PARK

Existing.
Small municipal park on Little Shuswap, within Village of Chase.

20. MARTIN MOUNTAIN

Proposed.
A proposal for further study is the development of a park somewhere in the Martin Mountain area, to serve entire region as well as the loosely defined Martin Prairie/Duck Range community. Park could be connected with South Thompson Trail System and possibly with Monte Lake Park via Paxton Valley.

21. MONTE LAKE PROVINCIAL PARK

Existing.
A small park with swimming, boating and fishing facilities, as well as 7 campsites, 3 picnic tables and drinking water. Landowner in area has proposed to sell his land to the government for park purchase.

22. HEFFLEY LAKE RECREATION AREA

Existing and proposed.
Several small park reserves and a fishing camp exist and may be developed and integrated with South Thompson Plan.

OTHER

Parkland development in South Thompson Basin could be phased to meet demand as it develops. Proposals for study could include parks near Rose Hill, Campbell Creek, Lion's Head, Adams River and Lake, Chum Lake and a bluff near Monte Creek. Park concept could be extended to include areas accessible by boat only, on Kamloops Lake as far as Savona or even Ashcroft. Park development could also proceed along North Thompson as far as Clearwater.

complex in order to provide an economic base for the Band. It is recommended that encouragement and reasonable co-operation be given the Niskonlith and other bands to develop commercial recreation facilities.

The Niskonlith development would include a campsite with beach along the river, a service station, an arts and crafts store, and a motel-neighbourhood pub complex. Canoe rentals or horse riding could be made available by the Band. The object of such development would be to provide a stable source of income, thus a profit oriented development would obviously be assumed. To support this type of development, the Regional District would limit all commercial recreation to the Reserves until such time as the economics indicate strong diminishing utilities associated with the overuse. This type of development would likely not increase traffic since the development would cater to the camper or boarder.

CONCEPT PROPOSAL II-E

Developments in the City of Kamloops

A number of imaginative developments are in the planning or implementation stage for the City of Kamloops. Specifically, the City of Kamloops is planning a large riverside park and town centre near and present downtown areas. MacArthur Park is oriented to the interface between recreation and the river. There are programmes directed toward purchase of parklands, greenways, and public access along the shores of the community's splendid rivers. It is recommended that wherever possible the plans of the City and the Regional District be co-ordinated. Certainly, planning of the South Thompson Valley and the rest of the region without considering Kamloops would be risky.

CONCEPT PROPOSAL III

Co-operation

The Thompson-Nicola Regional District should seek the co-operation of the Regional District of Columbia Shuswap in the planning of the South Thompson-Shuswap River Basin. This co-operation should be directed at alleviating possible external diseconomies associated with an interregional river basin. These might include impacts on water quality, aesthetic or recreational potential.

ADDENDUM:

Scenic Easements

A method of preserving environment and aesthetics of areas is now being developed in North America. This involves the purchase of "scenic easements." Scenic easements are purchases of certain rights over land from a private owner. For example, a public or private authority may purchase the rights to development of a parcel of land thus preventing its development. This may permit the vegetation on the banks of a river to be preserved without taking all of the owners rights to use of the land from him. The advantage of this approach is the great savings possible for the public in land purchase and the retaining of land on the tax rolls. The advantage to the landlord is his right to continue his present use and, where justly coupled with tax revision, his receipt of a tax reduction.

It should be remembered that an easement could not be considered a full right to land. If a scenic easement is purchased, it may not include rights to build trails, etc. Only rights agreed to by the easement agreement would be recognized.

This method is as yet of unknown usefulness for the South Thompson. The matter is under further study.